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INTRODUCTORY NOTE

Attention is drawn to the Foreword to the present volume written by Lord Hurcomb, the Chairman of the International Trust for Zoological Nomenclature. That Foreword applies to the volume as a whole, but for purposes of convenience it has been included immediately behind the Title Page for Section A.

In his Foreword Lord Hurcomb described the scope and contents of the present volume and explained the reasons which had prompted the International Trust to divide the volume into two separate Sections, each provided with its own Title-Page.

At the same time Lord Hurcomb added that on the invitation of the Trust the preparation of these concluding Parts (Parts 41 and 42) had been kindly undertaken by Mr. Francis Hemming, as having been Secretary to the Commission and Editor of the *Bulletin* throughout the period covered by the publication of this volume.

Offices of the International Trust
for Zoological Nomenclature,

41, Queen's Gate,

London, S.W.7.

15*th October* 1958.

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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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* Professor Esaki died on 14th December 1957, while the present Part was passing through the Press.

BULLETIN OF ZOOLOGICAL NOMENCLATURE

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CASE No. 27

DRAFT "RÈGLES", ARTICLE 5, SECTION 3: QUESTION OF THE NATURE AND SCOPE OF THE PROVISIONS TO BE INSERTED EMBODYING THE "PRINCIPLE OF CONSERVATION" ADOPTED IN PRINCIPLE BY THE COPENHAGEN CONGRESS IN 1953

(Commission Reference: Z.N.(S.) 861)

(For the relevant provisions in the Draft of the Revised *Règles* see 1957, *Bull. zool. Nomencl.* **14** : 43–45)

PURCHASED
24 APR 1958

DOCUMENT 27/1

Historical Note on the proposal to incorporate in the "Règles" a provision embodying the "Principle of Conservation"

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 29th January 1958)

The present note is intended to provide a historical background for the proposal that there should be included in the Revised *Règles* a provision designed to provide a semi-automatic mechanism for the protection of long-established names against attack on grounds of priority from older but long-neglected or long-overlooked names. This matter will be familiar to those members of the London Colloquium and the London Congress who took part in the discussions at Copenhagen in 1953 but there will be many zoologists attending the London meetings who were not present at Copenhagen and who are not fully acquainted with the history of this matter.

2. The present problem was first placed before the Commission in 1948 in connection with the then-forthcoming meeting in Paris of the Thirteenth International Congress of Zoology. The paper in which this matter was then raised was submitted by Dr. Henning Lemche (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) who then recommended the insertion in the *Règles* of a provision recognising a " Law of Prescription ". This proposal which was the second of two proposals then submitted by Dr. Lemche was as follows :—

> It is proposed that the following new paragraph (paragraph (b)) in Article 34 of the Rules :—
>
> > Article 34(b).—A name of a genus or species, given before the year 1850 and not used in scientific literature since January 1st, 1850, is to be rejected in favour of such other name which has been in general use for the genus or species in question since that date.

Dr. Lemche's paper, to which was annexed a list of the names and addresses of a large group of Scandinavian zoologists who supported his plan, was published in 1950 (*Bull. zool. Nomencl.* **3** : 158–161).

3. Dr. Lemche's proposal was debated at length in Paris both by the International Commission and by the Section on Nomenclature of the Congress. Ultimately, the Section, in agreement with the Commission, adopted the following Resolution, which was submitted to, and approved by, the Congress at its Final Plenary Session :—

THE SECTION agreed :—

(1) to take note (a) of the proposal put forward by Dr. H. Lemche (*Denmark*) for the incorporation in the *Règles* of a provision recognising a Law of Prescription which would prohibit the replacement, on grounds of priority, of well-known names by names published prior to 1850 where those names had not subsequently been used in scientific literature and (b) of the similar proposal submitted by Professor Pierre Bonnet (*France*) ;

(2) to invite the International Commission on Zoological Nomenclature to study the question of how to secure greater stability in zoological nomenclature and to submit a Report thereon, with recommendations to the next (Fourteenth) International Congress of Zoology ;

(3) to recommend that, without prejudice to the recommendations to be submitted under (2) above, there should at once be inserted at an appropriate point in the *Règles* a provision :—

(a) that, where a worker discovers that a well-known name in common use, particularly a name of importance in medicine, agriculture, veterinary science or other applied fields of biology, is invalid under either the Law of Priority or the Law of Homonymy or, in the case of a generic name, has as its type species a species other than the species commonly accepted as such, that worker should at once report the case to the International Commission on Zoological Nomenclature for such action as the Commission may deem to be proper ;

(b) that in such a case neither the worker by whom the error in accepted practice is discovered nor any subsequent worker should change that practice by substituting some other name for that in common use until such time as the decision on the future status of the name in question is made known by the said Commission.

4. In accordance with the Item (2) of the Resolution of the Paris Congress quoted in the immediately preceding paragraph the question of the adoption of a Law of Prescription as a means for promoting stability in zoological nomenclature was discussed with other—but non-competitive—methods which had been suggested for securing the above end in a paper which, as Secretary, I prepared in the autumn of 1951 as the basis of an appeal to specialists for comments and advice on the proposal submitted by Dr. Lemche and on the associated (but independent) proposals received from other sources. The paper so prepared was published on 15th March 1952 in Double-Part 5/6 of Volume 7 of the *Bulletin of Zoological Nomenclature*, the volume earmarked by the International Trust for Zoological Nomenclature for the publication of the first instalment of documents submitted for consideration by the International Congress of Zoology to be held at Copenhagen in 1953 (Hemming, 1952, *Bull. zool. Nomencl.* **7** : 148–188). The problem of finding means for the promotion of greater stability in zoological nomenclature was thereupon entered on the Copenhagen Agenda Paper as Case No. 1. The appeal issued in 1952 elicited a large number of comments from zoological institutions and individual zoologists. The documents in question—fifty-eight in number—were published (as Documents 1/1 to 1/58) on 25th June 1953 in Triple-Part 1/3 (: 1–108) of Volume 8 of the *Bulletin of Zoological Nomenclature*, the second of the three volumes of the *Bulletin* earmarked by the International Trust for the publication of the Copenhagen Agenda Paper.

5. Particular attention to the proposal for the recognition of a " Law of Prescription " was paid at Copenhagen both by the Colloquium on Zoological

Nomenclature and by the Section on Nomenclature. In addition, a special Plenary Session of the whole Congress was devoted to the consideration of this subject. At this Session it was agreed by a majority that it was desirable that the foregoing " Law "—then re-christened the " Principle of Conservation "—should be recognised in the revised text of the *Règles* " to a limited extent ". It was not found possible, however, before the end of the Copenhagen Congress to reach agreement as to the nature or extent of the " Principle of Conservation " so to be recognised and the Congress accordingly invited the International Commission to take this matter into consideration after the close of the Congress. In view of the importance of these discussions the following extracts from the Official Record of the Decisions on Zoological Nomenclature taken by the Copenhagen Congress (1953, *Copenhagen Decision on Zoological Nomenclature* are attached as appendices to the present paper for purposes of reference :—

(1) Decisions 27–30 entitled " Recognition of the Principle of Conservation " (*op. cit.* : 25–26) (Appendix 1) ;

(2) Four documents containing suggestions as to the possible scope of the proposed " Principle of Conservation " submitted to the Copenhagen Congress and referred by that Congress to the Commission for consideration (*op. cit.* : 199–122) (Appendix 2).

6. Since the Copenhagen Congress four documents bearing on the question of the " Principle of Conservation " have been received. These are :—

(a) a paper entitled " Stabilization of Zoological Nomenclature by a ' Law of Prescription ' ", by Dr. Philip Hershkovitz (*Chicago Natural History Museum, Chicago, Illinois, U.S.A.*), submitted under cover of a letter dated 10th November 1954 (now placed on the Agenda Paper as Document 27/2) ;

(b) a paper entitled " Proposal that the ' Principle of Conservation ' fix intrageneric availability for Validity as well as Validity of Specific Names ", by Professor Hobart M. Smith (*University of Illinois, Urbana, Illinois, U.S.A.*), submitted under cover of a letter dated 13th October 1955 (now placed on the Agenda Paper as Document 27/3) ;

(c) the proposals embodied by Professor J. Chester Bradley in the Draft of the English Text of the Revised *Règles* (reprinted as Document 27/4) ;

(d) objections to the plan proposed by Professor Chester Bradley and submission of Revised Proposal : paper received from Dr. Henning Lemche (*Universitetets Zoologiske Museum, Copenhagen*), submitted under cover of a letter dated 27th January 1958 (Document 27/5).

APPENDIX 1 TO DOCUMENT 27/1

The Principle of Conservation : Extract from the Official Record of the Proceedings of the Fourteenth International Congress of Zoology, Copenhagen, 1953

(Reference : 1953, *Copenhagen Decisions zool. Nomencl.* : 25–26)

27. Recognition of the Principle of Conservation : After considerable discussion, the Colloquium agreed, by a majority, to recommend the inclusion in the forthcoming edition of the *Règles* of a provision recognising the Principle of Conservation to a limited extent. The text of the resolution so adopted (which was based upon a proposal first made by Dr. Henning Lemche) is reproduced as Document 1 in Appendix 2 to the present Report. On the day following the adoption of this Resolution an alternative draft intended substantially to cover the same ground but to present the scheme in a rather different way was submitted by Dr. Carl L. Hubbs and Mr. W. I. Follett ; this draft is reproduced as Document 2 in Appendix 2. The circulation of these documents to the Colloquium led to the submission of two further drafts ; of these the first was submitted by Mr. N. D. Riley, while the second was a joint proposal submitted by Mr. Follett, Dr. Ernst Mayr, Mr. R. V. Melville, and Professor Robert L. Usinger. The text of these proposals is reproduced as Documents 3 and 4 in Appendix 2. It was unfortunately found impossible to secure agreement upon any of these drafts.

28. In the course of a general discussion on the question of the means to be found for promoting stability in zoological nomenclature which took place in a Plenary Session of the Fourteenth International Congress of Zoology held on the morning of Friday, 7th August, 1953, Dr. Carl L. Hubbs threw out a suggestion for meeting the difficulty in a new way, namely that no further attempt should be made to secure agreement on a detailed proposal and that instead there should be inserted in the Report a paragraph (1) stating that it was recommended that the *Règles* should include a provision limiting the application of the Law of Priority in such a way as to preserve any well-known name which had been in general use for a considerable period from being sunk as a junior synonym of some much older name which had not been used more than a small number of times in a specified recent period of considerable length, this provision to contain also the best safeguards that could be devised to prevent the abuse of the proposed provision by unscrupulous persons, and (2) entrusting to the Commission the duty of preparing a definite provision on the foregoing lines. It was part of Dr. Hubbs' proposal that the provision to be inserted in the *Règles* on the foregoing subject should be as brief and concise as the circumstances would permit. Mr. Francis Hemming, Secretary to the International Commission on Zoological Nomenclature and Chairman of the Colloquium, then proposed that advantage should be taken of the large

attendance at that Plenary Session to obtain a general expression of opinion on the merits of the suggestion that had been made by Dr. Hubbs. Mr. Hemming accordingly proposed a motion in the terms set out above. After this proposal had been seconded by Dr. A. do Amaral, Vice-President of the Commission, and supported by Dr. Hubbs and Dr. Ernst Mayr, the motion was put to the Plenary Session by the Chairman (Dr. B. Rensch) and was unanimously adopted.

29. The question was further considered at a meeting held jointly with the Section on Nomenclature of the Congress and with the International Commission on Zoological Nomenclature on Monday 10th August 1953. The Colloquium then agreed by a majority to recommend, and it now recommends, the insertion in the *Règles* of a provision in the sense of the Resolution informally adopted at the Plenary Session held on Friday, 7th August 1953, as recorded in the preceding paragraph, the precise wording of this provision to be left to be determined by the International Commission.

30. The Colloquium further recommends that, whatever may be the form which the International Commission may adopt for giving effect to the Principle of Conservation within the field prescribed by the Resolution adopted by the Plenary Session of the Congress held on Friday 7th August 1953, that scheme should include provision, by way of a *Recommandation* or otherwise, for names which are rejected under the Principle of Conservation to be placed upon the appropriate *Official Index of Rejected and Invalid Names.*

APPENDIX 2 TO DOCUMENT 27/1

The Principle of Conservation : Four Draft Proposals submitted to Colloquium on Zoological Nomenclature, Copenhagen, 1953, and referred for later consideration

(Reference : 1953, *Copenhagen Decisions zool. Nomencl.* : 119–122)

ANNEXE 1 OF APPENDIX 2 TO DOCUMENT 27/1

Draft proposed by Dr. Ernst Mayr (American Museum of Natural History, New York)[1] as amended in discussion at the afternoon Session of the Colloquium on 31st July 1953

Where two specific names are available for a given taxonomic unit, the older of these names shall be the valid one for that unit, unless it is invalid as a junior homonym or it is rejected under the procedure specified below.

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[1] Later Dr. Ernst Mayr participated in the submission of an alternative draft. See Annexe 4 of the present Appendix.

Any specific name which has been published for not less than sixty years and which has been adopted for a given taxonomic unit (a) in at least ten publications, and (b) by two or more authors, shall be deemed to be worthy of conservation in the interests of stability. Except as provided below, such a name is not to be replaced by a senior subjective synonym where the latter has not been applied to the taxonomic unit concerned during the preceding fifty years. Where an author considers it desirable that such a change should be made, he shall, when making that change, cite bibliographical references to two occasions on which during the prescribed period the senior synonym has been adopted for the taxonomic unit concerned by at least two separate authors. Where an author has recorded such a name without adopting it, his action does not qualify as a usage under the foregoing provisions.

ANNEXE 2 OF APPENDIX 2 TO DOCUMENT 27/1

Alternative draft submitted jointly by Dr. Carl L. Hubbs (Scripps Institution of Oceanography, La Jolla) and Mr. W. I. Follett (California Academy of Sciences)[2]

It is proposed that provision should be made in the Section of the *Règles* applying to both genera and species for the application of the Rule of Priority with the following limitation :—

> When two (or more) available names of equal rank are regarded as based on the same taxonomic unit, the older (or the oldest), if not a junior homonym, should ordinarily be the valid name. The junior name, however, will become valid if and when the following conditions are both fulfilled :—
>
> (1) Evidence is published, with bibliographical references, that the junior name is at least sixty years old and has been adopted for that taxonomic unit by two or more authors (or co-authors) in more than nine publications ; and that the senior name has not been applied to that taxonomic unit during the past fifty years in any publication (nomenclators and other purely bibliographic treatises excepted).
>
> (2) Notice of the publication of such evidence has been presented in the *Bulletin of Zoological Nomenclature.*

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[2] Later Mr. Follett participated in the submission of an alternative draft. See Annexe 4 of the present Appendix.

The junior name shall be invalidated if within two years from the date of publication of that notice, evidence, accompanied by bibliographic references, has been received by the International Commission that the senior name was adopted for that taxonomic unit during the stipulated fifty-year period in at least two publications by different authors. The junior name may then be revalidated only by the International Commission using its Plenary Power.

ANNEXE 3 OF APPENDIX 2 TO DOCUMENT 27/1

Alternative draft submitted by Mr. N. D. Riley (British Museum (Natural History))

When two names are available for a given taxon, the older, unless an invalid junior homonym, shall prevail, except that a junior synonym that has been (a) published not less than sixty years and (b) adopted for the given taxon by two or more separate authors, shall be conserved in the interests of stability, and is not to be replaced by the senior synonym except under the following conditions :—

(i) that evidence satisfactory to the Commission is submitted to it, citing references to at least two works (nomenclators and bibliographic treatises excepted) which demonstrate that the senior synonym has been applied to the given taxonomic unit within the last fifty years ;

(ii) that notification of the receipt of such evidence is published in the *Bulletin of Zoological Nomenclature* ;

(iii) that the Commission, after a lapse of two years from the date of publication of the notification, rules that such replacement shall take place.

ANNEXE 4 TO APPENDIX 2 TO DOCUMENT 27/1

Alternative draft submitted jointly by Mr. W. I. Follett (California Academy of Sciences), Dr. Ernst Mayr (American Museum of Natural History, New York), Mr. R. V. Melville (Geological Survey and Museum, London) and Professor Robert L. Usinger (University of California, Berkeley)

A valid name in general current use should not be displaced by a senior synonym which has not been in similar use during the past fifty years. The mere citation of a name (in synonymy or in recording publications) does not constitute use of that name in the sense of this Article.

Where an author proposes to displace a junior synonym in general current use, he must cite bibliographical evidence to show that his intended action would promote stability and universality of nomenclature ; and must give notice of his proposal in the *Bulletin of Zoological Nomenclature*, when, if unchallenged before the end of [——] years, the proposed change shall be made.

In groups where the standard works are more than fifty years old, specialists may apply to the Commission for an extension of the specified period of fifty years.

DOCUMENT 27/2

Stabilization of Zoological Nomenclature by a " Law of Prescription "

By **PHILIP HERSHKOVITZ**

(*Chicago Natural History Museum, Chicago, Illinois, U.S.A.*)

(Enclosure to a letter dated 10th November 1954)

Introduction

The Colloquium on Zoological Nomenclature held in Copenhagen in 1953 recommended that there be inserted into the *Règles* a provision limiting the application of the Law of Priority in such a way that selected names for animals would not be affected. The several suggested Laws of Prescription published in Appendix 2 of the *Copenhagen Decisions on Zoological Nomenclature* (1953) and in the *Bulletin of Zoological Nomenclature* (1954, *Bull. zool. Nomencl.* **8** (10/11) : 288–282) do not offer, in my opinion, workable solutions.

2. A Law of Prescription incorporated into the *Règles* should consist of provisions freely applicable by all zoologists for the resolution of common problems. Such a law should not be the cause of a nomenclatural upheaval, however slight, and should not include provisions aimed solely at special problems, or reserved for exclusive use by, or that delegates extraordinary power to, a special group, exclusive of the body of the International Commission on Zoological Nomenclature.

3. Apart from Zoological reasons, the most frequent cause of confusion and controversy leading to instability in nomenclature is the deplacement of a name that has been commonly used for a specific animal, by an older name otherwise unknown since its introduction into the literature. Practically all such older names were originally published within the first Linnean century, or from 1758 to 1857, inclusive. In the vast majority of cases these older names were published in works the technical names of which were not consistently, if ever, cited by authors before 1858, and not cited since except for the purpose of replacing a junior synonym or invalidating an identical name of later date.

4. In view of the fact that the science of systematics in zoology is about to begin a third century since the adoption of the binominal system of nomenclature, it is suggested that the present Law of Priority be emended to incorporate another date, as follows :

> Whereas the date 1758 is accepted as the starting-point of zoological nomenclature and the Law of Priority, it is proposed that the date 1858 be accepted as the starting point for rejection of all generic and specific names in any zoological work published prior to 1858 if that name has not been given currency from 1858 to 1957 according to the provisions of the following suggested Law of Prescription.

A Suggested Law of Prescription

> A generic or specific name published prior to 1858 shall not be available to zoological nomenclature if the work in which it first appeared has not been cited in zoological literature between the years 1858 and 1957 inclusive.
>
> (a) For the purpose of this Law, Date of Publication shall be the year printed on the last number of the work containing the name.
>
> (b) A name introduced prior to 1858 in a volume or number of a serial publication the last volume or number of which was published in 1858 or later, shall be regarded as available.
>
> (c) A name introduced prior to 1858 and known only from the original publication, but cited together with the original bibliographic reference in a standard work published between the years 1858 and 1957, inclusive, shall be available.
>
> (d) A name shall be deemed unavailable if introduced prior to 1858 and not cited together with its original bibliographic reference between the years 1858 and 1957 except as a *nomen inquirendum* or *nomen dubium*.

5. The proposed Law is designed for the rejection of names in any List, Sales Catalog, Text Book, System, Narrative and other accounts with descriptions of animals, that may have been published in the first Linnaean century but which has been overlooked by systematists during the course of the second Linnaean century. None of the provisions of the proposed Law trespass into the zoological domain. None of the provisions apply to names in current use, and no name already disposed of by application of the Law of Priority can be revived by reason of this proposed Law. Safeguards are provided for names, irrespective of dates, that appear in works regularly consulted by systematists. Use of the year for unit of time as provided in (a) of the proposed Law eliminates troublesome discussions over precise day or month of publication and actual date of issue.

6. The above propositions may be summarized as follows : Any generic or specific name published in the first Linnaean century (1758–1857) not cited or otherwise carried along in the literature of the second Linnaean century (1858–1957) is not available to zoological nomenclature after 1957.

DOCUMENT 27/3

Proposal that the "Principle of Prescription" fix Intrageneric Availability for Validity as well as Validity of Specific Names

By **HOBART M. SMITH**

(*University of Illinois, Urbana, Illinois, U.S.A.*)

(Enclosure to a letter dated 13th October 1955)

Inflexible application of the Law of Priority may possibly lead to confusion in a number of taxonomic situations. It nowhere leads more certainly to confusion than in preservation of validity of specific names, through seniority, as they may be shifted from one intrageneric entity to another. Assurance should be provided by the International Rules of Zoological Nomenclature that confusion from such sources be reduced to a minimum.

Cases

Three examples of recent occurrence in herpetology in North America are pertinent to this discussion.

(1) The name *Thamnophis sirtalis* (Linné) 1758 was, between 1913 and 1948, associated in virtually all literature with the Common Garter Snake, and the name *Thamnophis sauritus* (Linné) 1766 with the Ribbon Garter Snake. In 1948 the name *sirtalis* was found actually to have been based upon an example of the Ribbon Snake ; by the Law of Priority the Ribbon Garter Snake acquired the valid name of *T. sirtalis*, whereas the Common Garter Snake took the next available name of *T. ordinatus* (Linné) 1766. Subsequently complete confusion reigned, as the intention of any author using the name *T. sirtalis* was often uncertain. The situation was further confounded when a request for preservation of the *status quo* (as of the era 1913–1948) was introduced. Even up to the present time no uniformity of procedure exists, and only the action of the Commission is likely to achieve unity.

The species here concerned are common, and despite the lack of any great significance in experimental fields are of sufficient familiarity to scientists in general that their scientific names should have been preserved intact despite the inaccuracy of association.

(2) The name *Thamnophis eques* (Reuss) 1834 was, between 1907 and 1950, applied to the Checkered Garter Snake. In 1950 that name was discovered to apply to the Mexican Garter Snake, previously known as *Thamnophis macrostemma* Kennicott, 1860. With the *Thamnophis sirtalis-sauritus* fiasco in mind, due consideration was given to the propriety of requesting preservation of the *status quo* through plenary action of the International Commission on Zoological Nomenclature. However, it was considered that these species are not common and that their names did not merit special appeal to the Commission for preservation. Accordingly the switch was made, and even though no appeal has been made to block the switch, the confusion is such that every usage of the name *eques* must be accompanied by an explanation that it is in the post-1950 sense, not the pre-1950 sense. Clear discussion pertaining to either species involved is greatly hampered by the uncertainty of meaning the name *eques* now inevitably carries. If such confusion can centre about a switch involving two species as relatively obscure as these, then almost any switch, after a certain period of stability and uniformity of nomenclature, would be an equally undesirable source of confusion.

(3) A much happier case is provided by *Heterodon simus* (Linné) 1766, applied without variation since 1900 to the Southern Hognose Snake. In 1953 it was found that this name actually is based upon the Common Hognose Snake (currently known as *Heterodon platyrhinos* Latreille, 1802) but in order to preserve the *status quo* despite the relative obscurity of the species an immediate appeal was made to the International Commission for preservation of the name *simus* in its present sense. Although as yet no final decision has been made, only assenting voices have been heard, and eventual fixation of *simus* with the Southern Hognose Snake seems assured.

These examples, which could be multiplied many times, suffice to reveal the gravity of shift of valid name, after a period of uniformity of application, from one species to another in a single genus. No option should be allowed.

Definition of Stability

Determination of what constitutes an adequate period of stability, and of what constitutes stability itself, is of course the chief hurdle in the path of enactment of such a rule. The above cases would have been blanketed by a 35-year requirement, but other equally valid cases might arise after but 15 years of stability, or even less. Stability, and length of time required for demonstration of stability, require a certain frequency of use of the given name. The less frequently a name is used, the less quickly can its use be said to be stable. Perhaps the number of consecutive uses by different authors offers an approach for definition of both variables. A possibly acceptable criterion is agreement upon a given name either (a) by a minimum percentage (say 85 per cent.) minimum number (say 8) of authors last using the name, or (b) by a minimum percentage (say 85 per cent.) of the authors publishing the name over the 50 years period prior to the time of discovery of the error of application. Dubious cases could and should be referred to the Commission.

Mode of Enactment

The " Law of Prescription " currently under consideration can be so phrased as to embrace the present proposal, and consideration of that possibility is hereby requested. None of the four drafts published (1953 *Copenhagen Decisions zool. Nomencl.* : 119–122) have provided for fixation of availability, however ; their concern is with fixation of validity.

In this connection, stability of nomenclature may be viewed from two different points : (a) fixation of valid names with given taxa, thereby establishing that never can any one taxon be referred to by more than one valid name ; and (b) limitation of availability for validity of given names for given taxa, thereby establishing that a specific (or subspecific) name usually associated with (valid for) one taxon cannot be transferred as a valid name (it could as an invalid name) for another taxon in the same genus. In the latter situation, valid names of given taxa may be changed, but the usually accepted valid name of one taxon could not at any time immediately become the valid name of another taxon in the same genus.

The value of separate consideration for the second view under the general Law of Prescription is that a change of name in any one species actually is seldom confusing or important to avoid, whereas a shift of a single name from one species or subspecies to another in the same genus is always confusing. With this difference in mind, it is evident that fixation of availability for valid names may and should be practised at a lower level (within lesser time limits) than is practical for fixation of validity for names. Conceivably a vast literature could grow about a name within a few years (as witness *Xenopus laevis* 1945–1950 when the species suddenly became popular for pregnancy tests), and thus could merit the assurance at least that that name would be applied to no other species, even though some other name might conceivably be applied to the same species. Fixation of validity of a name should, as has been generally understood, require constancy of usage over a certain designated period of time (say 50 years), although an objective criterion of constancy (as for example use by a given percentage, say 85 per cent., of authors publishing on the species over the specified time period) should be added.

Summary

It is recommended that Draft No. 4* of the " Principle of Conservation " (1953 *Copenhagen Decisions zool. Nomencl.* : 122) be revised as follows (proposed changes in italics) :—

> *Fixation of valid names : a currently valid name in general use* (*i.e., by — per cent. of the authors publishing on the species*) *for fifty years should not be displaced by another name.*
>
> *Fixation of available names : no valid name in general current use* (*i.e., by — per cent. of the — authors most recently publishing on the species*) *is to be regarded available as the valid name for another species in the same genus.*
>
> *Provisions.* The mere citation of a name (in synonymy or in recording publications) does not constitute use of that name in the sense of this article.
>
> Where an author proposes to displace a junior synonym in general current use, he must cite bibliographical evidence to show that his intended action would promote stability and universality of nomenclature ; and must give notice of his proposal in the *Bulletin of Zoological Nomenclature,* when, if unchallenged before the end of —— years, the proposed change shall be made.
>
> In groups where the standard works are less than fifty years old, specialists may apply to the Commission for *a reduction* of the specified period of 50 years.

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*The Document here referred to appeared under this number in Appendix 2 in the work *Copenhagen Decisions on Zoological Nomenclature.* It has been reprinted as Annexe 4 to Appendix 2, to Document 27/1 (see page 628 of the present Volume).

DOCUMENT 27/4

Professor J. Chester Bradley's proposals relating to the " Principle of Conservation " incorporated in Article 5, Section 3 of the Draft of the English Text of the Revised " Règles "

(Reference : 1957, *Bull. zool. Nomencl.* **14** : 43–45)

Section 3. The Principle of Conservation. If a name for a taxon that is not an invalid homonym is in general current use and has been available for fifty years or more,* it shall not be replaced on nomenclatural grounds† by a senior synonym, unless the latter has been widely used during some part of the fifty years preceding its proposed substitution.

Citation of a reference, as in a recording publication, without adoption of the name, shall be disregarded for the purpose of this Rule.

(i) **Procedure.** A zoologist wishing to reject permanently such a senior synonym shall send his proposal to the *Bulletin* for publication along with all pertinent bibliographical data that it is feasible to assemble and publish. If within a period of two years after publication no protests have been received, the case shall be deemed closed, and the names concerned shall be published on the appropriate *Official Lists*. If protest is received within the two-year period, decision shall be made by the Commission. Pending completion of the two-year period, or decision by the Commission, the existing usage shall be maintained.

Explanation : It is realized that interpretation of " general current use " and " widely used " must necessarily be subjective. It is also recognized that complete search of the literature for the fifty-year period would usually be impracticable.

(**Discussion : Conservation.** The Congress directed the Commission to phrase this section within the framework erected by paragraph 28 page 25 of the Copenhagen Report. Accordingly I propose the wording that I have included in my draft of the *Code* as a basis for consideration by the Commission. I have endeavoured to cover all points included in the several drafts. The only feasible method seems to be to state the mandatory Rule in general terms, then to give practical directions as to what is to be done if a case arises. Following this the " Explanation " frankly recognizes the necessarily subjective nature of deciding what cases should come under the provision of this section, and the impracticability of completely searching literature in connection with every case. But the criteria which the zoologist should apply are stated in the first *Recommendation*, rather than in a mandatory Rule, because in the infinite details of cases that will arise, they must be flexible. If the judgment of other specialists concurs with that of the proposer, conservation becomes automatic, if not the Commission must decide, in the interests of continuity, without being bound by statistics of usage, though they should take note of them so far as available.)

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*Counted up to the time when suppression of the name comes under consideration. (Compiler.)

†Such a name could be replaced on taxonomic grounds by anyone who does not recognize the taxonomic validity of the taxon. (Compiler.)

"**Recommendation**" **1. Criteria of usage.**—A zoologist in proposing the suppression of a senior synonym under this section, should in general be guided by the following criteria: (a) that the name to be conserved has been in use for a period of fifty or more years preceding his proposal; (b) that the name is of sufficient importance to have appeared ten or more times in literature, exclusive of bibliographical references; (c) that the senior synonym that it is proposed to suppress has not been used during the preceding fifty-year period in more than a minor percentage of cases.

C.p. 25, par. 27–29, and p. 119–122

"**Recommendation**" **2. Changes in well-known names to be reported.**—When a taxonomist finds that the well-known and commonly used name of a taxon is invalid, he should at once report the case to the Commission for such action as it may deem proper. This *Recommendation* applies especially to names of importance in applied biology.

B.4 : 234, par. 4 (3a)

"**Recommendation**" 3. **Misinterpretation of generic names.**—The preceding *Recommendation* applies also in case a taxonomist finds that the type-species of a nominal genus is one not commonly referred to the taxonomic genus to which the name is cutomarily applied, or to a segregate thereof.

B.4 : 234, par. 4 (3a)

"**Recommendation**" 4. **Conservation of names.**—In cases to which the preceding *Recommendations* apply no one should substitute another name for the one in common use until the Commission has decided upon the future status of the name in question.

C.p. 26, par. 30

DOCUMENT 27/5

The Principle of Conservation : Objections to Professor Bradley's Draft and Submission of a Revised Proposal

By **HENNING LEMCHE**

(*Universitetets Zoologiske Museum, Copenhagen*)

(Enclosure to a letter dated 27th January 1958)

As one of the parents of the Principle of Conservation now to be formulated in the Revised *Règles*, I am very sorry to feel forced to object strongly to the present draft which, in spite of all efforts behind the final formulation, fails to cover the essentials of the idea as accepted in 1953 by the Copenhagen Congress.

2. A short historical survey is necessary for a clear understanding of the case. Speaking for 63 Scandinavian zoologists (8 others did not cast any vote or objected to my proposals) I presented to the Section on Nomenclature of the Congress in Paris in 1948 a proposal aiming at preventing unnecessary name-changing. The said proposal ran as follows :—

> " A name of a genus or species, given before the year 1850 and not used in scientific literature since January 1st, 1850, is to be rejected in favour of such other name which has been in general use for the genus or species in question since that date."

3. The proposal, however, did not reach the Secretary in sufficient time to be put officially on the Agenda of the Section on Nomenclature in 1948, but this was done for the next Congress in 1953, where the proposal was much discussed by the Colloquium prior to the Congress. Finally, it was adopted in principle by the Colloquium, although agreement could not be reached on its final wording. This was the reason why several other drafts were produced by participating zoologists, and these drafts have all been published in the *Copenhagen Decisions* with the only exception that my original draft for some unknown reason was left totally out. In the end, the draft delivered by Dr. Mayr was accepted by the Colloquium and, as it was the only one containing the general principle from my original proposal, I could accept and second it.

In the following Section on Nomenclature, this proposal was accepted by a very high majority of the large audience that had arrived in order to vote on this particular case.

4. Turning now to the merits of the present wording in the Bradley draft, the statements in Article 5, Section 3 *Principle of Conservation* (: 43, line 18) are adequate but rather diffuse. But the following paragraph (i) *Procedure* (: 44, line 1) turns the whole idea upside down. Here a procedure is prescribed by which it should become possible to retain a name in common use. But, if there should be any prescribed procedure, it should advise how to preserve the seniority of the neglected name in the very improbable case that it should be wanted.

5. Name-changing at present is so very easy because everybody can introduce an overlooked name simply by mentioning it in a paper. Then, the shift is made legal and obligatory to others, unless someone takes the burden to provide evidence that the change is a nuisance. All the burden of labour is placed on the shoulders of those who do not want to go into nomenclatorial subleties but only wish to remain undisturbed with their common usage. This situation is most unfortunate, but the only way out is to make it difficult to change and easy to continue usual practice. We must impose on the name-changers every possible duty to show their actions to be necessary, whereas those adhering to common usage should be given all the advantages. This view is what was aimed at by formulating my first proposal, and Prof. Mayr's accepted draft contains the same viewpoint.

6. However, the Bradley draft of the Revised *Règles* is definitely contrary to the proposal accepted in 1953 whereas it conforms to the never accepted ideas presented in the several rejected drafts from other members of the Commission who, with their very best intentions, tried to assist in making the new proposal useful.

7. I have now made an attempt to re-formulate the whole Section 3, guided by the lay-out of the Bradley draft but covering the meaning of the accepted Mayr proposal. Before citing its wording, I should like to make a few comments.

8. It is important to note that, under the Principle of Conservation, an extensive search through the literature is never needed for retaining a name. But as soon as a change is intended, there is a burden of labour.

9. I have met with only one type of real objection to these ideas, viz. from scientists feeling it as their duty to use in their papers only names which they feel are the final ones. These highly esteemed zoologists make an extremely valuable work, but I think that their opposition to the Principle of Conservation cannot be maintained. They cannot provide us with any guarantee that their names are really the oldest ones. The failure of the Principle of Priority, as strictly applied, to provide us with a stable set of names during the past 60 years or more is ample proof that their good intentions are not practicable, which is exactly the reason why the Principle of Conservation has been proposed.

10. The differences of action between the two sets of provisions are :

(a) In the existing *Règles* authors had to search all possible literature for securing that they had found the very oldest name for each taxon—and they could never be sure that they had not overlooked a still older one.

(b) In the Draft *Règles* authors in general shall make no such search, because the generally accepted name shall stand. In a very few cases where it is uncertain whether or not there is an " established usage " contrasting a priority-claim from a senior name, authors wanting to be sure of the nomenclatorial status of their names will have to search their literature for the last fifty years to ensure that a certain name has—or has not—been used a sufficient number of times. As soon as the minimum number has been reached, further search is superfluous.

11. Should it be objected that the older literature is easier to go through than the newer one will be, I should like to ask why, then, strict priority has failed to produce stable names during the past sixty years during which the old Rules were operating ? If, under the new provisions, some little known name should be rejected because of the priority of a senior name, and it appeared later that the junior name had been cited not 9, but 10 times in the period in question, this case would be a matter of no importance. Either, the case would in the meantime have grown too old for a change, or the change would set in at a later date than else. Such events could not happen to any important or more commonly used generic or specific name, and it is exactly the well-known ones which it is important to protect—and it is exactly these same names that have the better chance of possessing earlier and forgotten synonyms.

Draft Proposal for Article 5, Section 3

SECTION 3. THE PRINCIPLE OF CONSERVATION.

Whenever after [here insert date on which the Revised Text of the *Règles* comes into force] a well established name (or a spelling not subject to automatic correction) is found to be a junior synonym (incorrect spelling) of some older available name (correct spelling), it shall be the duty of the author discovering this synonymy, if changing to the older name (spelling) in some publication, to cite also at least two different papers—written by different authors and published less than 50 years before the change is publicly introduced—in which the senior name (spelling) has been accepted as the valid name of the said taxon. If he cannot produce such two references, he shall be in no right to change, and his action, if he attempts, shall be invalid and without prejudice, the junior synonym (spelling) to be retained in common use. Citations in synonymies or works of reference do not qualify.

Recommendation 1 : Criterion of usage.

The term " well established " as applied in this section is recommended to be taken to mean a name used for a taxon which is not so rarely mentioned that the junior synonym has been used less than ten times within the 50-years period as above explained.

Recommendation 2 : Action recommended to authors

Authors detecting long-neglected senior synonyms coming under the present Rule should at once report their find to the Commission in order to have the case finally settled under the Plenary Powers.

CASE No. 28

DRAFT " RÈGLES ": VARIOUS PROVISIONS RELATING TO THE FORMATION AND ORTHOGRAPHY OF ZOOLOGICAL NAMES

(Commission Reference : Z.N.(S.)1299)

DOCUMENT 28/1

Note on the form of Professor Pierre Bonnet's paper on the homogeneity and correction of zoological names and the procedure proposed to be adopted at the London Meetings for dealing with the issues so raised

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 7th January 1958)

The purpose of the present note is to explain the procedure proposed to be adopted at the London Meetings next July for dealing with the issues raised by Professor Pierre Bonnet in regard to formation and orthography of zoological names in the paper printed below which has been placed on the London Agenda Paper as Document 28/2.

2. Professor Bonnet's paper is in the form of a general survey of the theoretical and practical issues which arise in connection with the formation and orthography of names for use in zoological nomenclature. These issues are discussed by Professor Bonnet in the light of the provisions in regard thereto which figured in the *Règles* in the period up to 1948. No account has therefore been paid by Professor Bonnet to the decisions bearing on the foregoing matters taken by the Thirteenth International Congress of Zoology at Paris in 1948 and by the Fourteenth International Congress of Zoology at

Copenhagen in 1953. Professor Bonnet has informed me that he adopted this approach because he was of the opinion that it provided a better opportunity for the orderly presentation of the issues involved than would have been possible if he had entered into a detailed examination of the decisions in this field taken by the Congresses of 1948 and 1953. It will be seen from Professor Bonnet's paper that in respect of certain matters the course of action which he advocates has already been adopted by one or other of the above Congresses but that in a greater number of cases Professor Bonnet is not in agreement with the decisions taken by those Congresses.

3. In so far as Professor Bonnet's proposals are in line with decisions taken in Paris or at Copenhagen, the required provisions have been inserted in the draft of the English text of the *Règles* (*Bull. zool. Nomencl.*, vol. **14**, Parts 1–9) which will be considered by the London Meetings and accordingly no special procedural arrangements are called for in connection with the consideration of the questions so concerned. In so far however as Professor Bonnet advocates solutions different from those adopted by the Paris and Copenhagen Congresses, those solutions are at variance with the provisions in the Draft of the *Règles* which will be considered by the London Congress. In order to meet this difficulty, the attention of the Colloquium and the Congress will be drawn to those passages in the Draft *Règles* which are concerned with matters on which in his paper Professor Bonnet has advanced alternative proposals.

DOCUMENT 28/2

Homogeneity and correction of scientific terms in zoological nomenclature

(translation from the French prepared at the author's request in the Office of the International Trust for Zoological Nomenclature)

By **PIERRE BONNET**

(*Université de Toulouse, France*)

(Enclosure to a letter dated 30th November 1957)

I. Polymorphism of scientific terms

No systematist working on a group of animals over a long period, sometimes for a whole life-time, can fail to observe that a great number of generic and specific names used have been and are differently spelled by his predecessors in the field, and by his contemporaries respectively. This polymorphism in the names used becomes almost intolerable for the systematist who has to ask each time which spelling is the correct one, or which spelling to prefer, and has to decide for himself in each separate case.

2. Once the correct spelling has been established, there will be many workers who will follow it, even if told that it would have been preferable to use the rejected spelling ; many others, however, are open to a modification of their viewpoint, and not knowing how to make up their minds finally and which spelling to use, revert to the alternate usage of one spelling or the other. Hence the necessity of making clear to such workers which one is the correct way of spelling a name, the official spelling, as it were, to which they should conform thereafter.

3. On the other hand I think it is evident that once an author has made his choice as to the spelling of a word, he should conserve that spelling for all the derivatives of the same word. E.g.: if he uses the spelling *silvae* for the name for one species, then one ought to use the spelling *silvae* for all the species so named. One should even adopt this spelling for all the other names deriving from it like *silvarum*, *silvestris*, *silvaticus*, *silvarus*, *silvicola*, and consequently reject all *sylvae*, *sylvarum*, *sylvestris*, *sylvaticus*, *sylvarus*, *sylvicola*. It would be abnormal for an author giving a list of species to write as follows ; for instance : *Drassodes silvestris*, *Amaurobius sylvanus*, *Erigone silvatica*, *Cryphoeca sylvicola*. Nevertheless, this is exactly what Roewer did in his " Katalog der Araneae "—as we shall see later on.

4. It is necessary therefore for the authors to have very definite views as regards the spelling that they adopt and which they have constantly to use. It is evident that all workers working in the same field—and one can say all zoologists—ought to use the same spelling ; it is not admissible, for instance, that I should always use an " i " in spelling such words as *silvarum, and silvestris* whilst my colleague J. Denis should constantly use a " y ".

5. Nevertheless, that is what has happened so far and goes on happening —unfortunately. One cannot glance through the pages of a zoological journal carrying papers on systematic zoology using a number of generic and specific names without coming across these anomalies : the same name spelled in two different ways, sometimes in the same paper.

6. When one has carried out such a formidable task as I have done, that is to list all names of the Araneida published from 1758 up to 1939, transcribing thus between three and four million names, one can claim, I think, to know what one is talking about, one can even consider oneself to be better qualified than most others to deal with the matter, and to give advice as to how to achieve the accuracy and uniformity of zoological terms that is so desirable for all concerned.

7. If other zoologists have made equally extensive studies on other groups, they also could not fail to have observed, as I have done, the prodigious diversity which exists in spelling various names ; they must have come to the conclusion, like myself, that this polymorphism in spelling scientific terms ought to be brought to an end, and that henceforward a given name should be spelled in the same way everywhere, every time and at all times, irrespective of the person using it.

II. Original spelling

8. The polymorphism of certain scientific terms arises from the fact that in Latin there are words which can be spelled in two different ways (e.g. *silvestris* and *sylvestris*, *sulfureus* and *sulphureus*) and that latinised terms at the time of their creation were misspelled, the emendation having been introduced at a later date, (e.g. *Theridion* and *Theridium*). The Original Spelling is the one which was used at the time of the creation of a genus or a species. This original spelling is guaranteed by Article 19 of the *Règles de la Nomenclature Zoologique* : " Original spelling of a name must be conserved . . ." but fortunately the Article then adds : " unless it is evident that the name contains a mistake in transcription, a spelling or printing mistake." Certain authors make a virtue of conserving the original spellings, no doubt having in mind the first part of Article 19, and pretending to ignore the second half of same.

9. I would take this opportunity of criticising Roewer's " Katalog der Araneae " in which this author so much revealed his preference for conserving the original spelling. Here are a few examples :

(i) *Centromerus silvicola* (I : 530)
Cryphoeca silvicola (2 : 61)
Aranea sylvicola (1 : 792)
Aranea silvicultrix (1 : 792)
Haplodrassus sylvestris (2 : 401)
Lophomma sylvaticum (1 : 714)
Centromerus sylvaticus (1 : 531)
Corinna silvatica (1 : 600)
Thiodina sylvana (2 : 978)
Ixeuticus silvanus (2 : 1369)

(ii) *Lathys cambridgii* (2 : 1327)
Conothele cambridgei (1 : 146)
Aranoethra cambridgii (1 : 895)
Pseudidiops cambridgei (1 : 156)

(iii) *Alopecosa simonis* (2 : 220)
Arachnura simoni (1 : 752)
Comaroma simonii (1 : 604)
Myrmarachne simonis (2 : 941)
Leptodrassus simoni (2 : 405)
Heriaeus simonii (2 : 866)

(iv) *Myrmecium* Latreille (2 : 633)
Megamyrmaekion Wider (2 : 425)
Paramyrmecion Bryant (2 : 428)

(v) *Cheiracanthium* (2 : 476) ; *Ozyptila* (2 : 874) ; *Synema* (2 : 885)

(vi) *Pellenes belligerus* (2 : 1129) ; *Thianioides spinimanu* (2 : 1148)

(vii) *Hippasa simoni* Thor (2 : 312) whilst Thorell spelt *simonis*
Clubiona norwegica Str. (2 : 497) whilst Strand wrote *norvegica*
Psalmopoeus cambridgei Poc (1 : 256) whilst Pocock wrote *cambridgii*
Prostheclina cambridgei Pkh. (2 : 1100) whilst Peckham wrote *cambridgii*
Sparassus cambridgii Sim. (2 : 674) whilst Simon wrote *cambridgei*
Xysticus cambridgii Bl. (2 : 898) whilst Blackwall spelt it *cambridgei*

10. As regards *silvicola* and *sylvicola* etc. some spell the word with an " i " some others with a " y ", both these being Original Spellings and correct ones too, thus neither form is a misspelling and yet who would not be disturbed by seeing the word spelled both in this way and in that way at the same time ? Even though it may satisfy our feeling that the Original Spelling should be observed when correct, then it should always be so. But authors using such terms as a rule no longer remember whether the original spelling had an " i " or a " y ", and, often not being in a position to look up the original source (or not even thinking of doing so) spell the word on " the spur of the moment " as it were. That is why out of the 175 times that the name *Cryphoeca silvicola* has been cited, it was spelled 120 times with an " i " and 55 times with a "y ". (It is true that the original is spelled *silvicola*.) Out of 141 *Centromerus silvaticus* usages, there are 94 with " i " and 47 with " y " (and yet the Original Spelling was *sylvatica*).

11. With regard to *cambridgii* and *cambridgi* on the one part, and *simonis* and *simonii* on the other part, it is incongruous to adhere to these spellings which are contrary to rules. Article 14 of the *Règles* which provides that : " the genitive of a name based upon a modern patronymic is formed by the addition of an " i " to the exact and complete patronymic name . . .". Thus it follows that both, in the case of Cambridge and in that of Simon, the correct spelling is *cambridgei* and *simoni* ; any other spelling such as *cambridgii*, *cambridgi*, *simonii*, *simonis* is erroneous ; and to continue to use such a spelling would be tantamount to revolting against the *Règles*.

12. The spellings *Myrmecium*, *Megamyrmaekion*, *Paramyrmecion* seem to me a real monstrosity. It is admissible for two different authors to spell these names differently, but I am really surprised that one and the same author should spell the name *Myrmecium*, when combined with prefixes, in not less than three different ways. I think that he would even have used *Pseudomyrmession* or *Promirmecium*, had someone have thought of establishing such names.

13. As regards *Cheiracanthium* (1839), *Ozyptila* (1864) and *Synema* (1864) which were all misspelled originally, these names were soon amended to *Chiracanthium* (1848), *Oxyptila* (1869) and *Synaema* (1869) and have been frequently used in their corrected forms. I find it hard to understand that the erroneous Original Spellings should now have been resuscitated on account of their having been thus spelt at the time of their establishment. The resuscitation of a mistake that has already been corrected seems to me rather odd—to put it mildly.

14. But what really is beyond my understanding is the usage of improper grammatical concordances like *Pellenes belligerus* (for *P. belliger*) or *Thionioides* *spinimanu* (for *T. spinimana*). If it has to come to names like these, it is better to declare forthwith that zoological nomenclature is no longer in Latin . . . and we might as well stop formulating rules, since the conservation of the original erroneous spelling is absolutely contrary to established rulings.

15. As a matter of fact Roewer shows himself how wrong the conservation of the original spelling can become, resulting in loss of clarity regarding the terms which are spelled sometimes in one way and at other times the other way, the scientific worker being in danger ultimately of falling into serious confusion. Roewer ended up in such a confusion, as can be seen from the six instances quoted from his Catalogue (and, no doubt, many others could be quoted). I for my part herewith declare that in this instance the conservation of the original spelling is not admissible—although it may be correct in certain cases—since in the end one simply does not know in which spelling to put one's trust.

16. Finally, when acting according to a principle, like the principle of conserving in a catalogue the exact original spelling of the established names, one has to ensure that this spelling is reproduced very exactly in conformity with the original one. As Roewer conserved, the endings of patronymic specific names as originally spelled (like *simoni*, *simonii*, *simonis*) he should at the same time have conserved the initial capitals of the original spellings and should thus have used : *Simoni*, *Simonii*, *Simonis*. Whilst writing all these names—according to present rulings—with a small initial letter—and right he is too—I object to the observance of one rule and the rejection of others.

III. Uniformity and Emendation of names

17. This criticism of the spellings used by Roewer—especially in a recent work—illustrates the complete anarchy reigning in the spelling of millions of names in systematic taxonomy ; hence the necessity of striving to achieve the uniformity and correct spelling so much to be desired from every point of view. Uniformity and correct spelling will only be achieved through rules which are to be applied by everybody. I propose to formulate these rules later on in the present paper. It is most important to put these rules at the disposal of those who are in need of them. I propose also to criticise, up to a certain point, the procedure under which the International Commission on Zoological Nomenclature is required to consider separately each case, and to validate through the vote of Commissioners such and such a name. Nothing is wrong with this obviously, but I think that this method will not be conducive to achieving the result desired. In fact, this method brings with it the necessity of publishing an enormous amount of material. On the other hand a small book of about a hundred pages, containing the rules of zoological nomenclature which actually could be published in various langugages would enable thousands of zoologists in all parts of the world, to have at their disposal a book at a moderate price, with the help of which they could conveniently name an animal—and spell its name correctly. I believe that with these rules, even naturalists not having any Greek or Latin, could easily acquire the minimum rudiments required to be able to name an animal and to spell names correctly.

IV. Exceptions

18. There are, in fact, terms which could not possibly be made to conform strictly with a rule. And it is in the cases of names of this kind which were originally misspelled and have been used in the misspelled form ever since that the International Commission on Zoological Nomenclature should intervene in case an over-conscious zoologist wishes to apply to them such and such a rule.

19. I have had several times the opportunity to quote certain of these cases. I would for instance mention the specific names dedicated to Linnaeus and Fabricius which, correctly should be spelled *linnei* and *fabriciusi*, it is, however, convenient to conserve in these cases the original spelling : *linnaei* and *fabricii*, always used in this form. These spellings were indeed correct in the times of these authors ; the name of Linne having been latinised into Linnaeus and that of Fabricius having been considered a Latin name like that of Virgilius.

20. Specific names formed after modern patronymics ending with the letter " a ", like Racovitza, Fea, Rosca should read *racovitzai*, *feai*, *roscai*. But in former times it was considered necessary to use the genitive of the patronymic name according to the Latin genitive e.g. *podae* for Poda like Cinna, Cinnae. Here also it is advisable to continue with the spelling *podae* instead of *podai* as required by present ruling. Yet another case : The generic name *Argyroneta* established by Latreille in 1804 is always in like form and has been so used in thousands of cases ; yet the name was misspelled according to its etymology, and it should be *Argyronecta*. It is, however, obvious that after 150 years of usage the originally misspelled name cannot now be emended into the correct form. In all these cases where originally misspelled names have, through long usage, acquired the right to be always used in their original erroneous form, the Commission on Zoological Nomenclature should pronounce in order to validate the original form however erroneous it may be, according to the present rules of nomenclature.

V. Essential Rules concerning the homogeneity and emendation of scientific names

21. It is therefore important to establish a correct and stable nomenclature permitting names to be spelled everywhere and at all times in the same manner.

For this the only thing needed is the application of certain rules, the majority of which are already in existence today, but which to state precisely and to extend is only right and proper.

(a) Application of Article 3

22. " Scientific animal names are Latin or latinised names or treated as such in case they are not of classical origin." It is obvious, that when formulating this Article, our predecessors in zoological nomenclature wanted to make clear that the behaviour of these latinised names should conform to that of Latin names that is, that they should be formed and should have a concordance like the Latin names themselves. For this, it is not necessary—as some people seem to think—to be a Latin scholar or to have studied Latin for many years. For my part I am of the opinion that, if systematists were to have at their disposal a small guide setting out the rules of Latin grammatical concordance —the desired result would be obtained in a very short time.

(b) Application of Article 19

23. " The Original spelling of a name must be conserved unless it is evident that the name contains a mistake in transcription, or a spelling or printing mistake." It is thus necessary to emend all names formed after Greek words, the transliteration of certain letters of which is inaccurate. Thus :

Cheiracanthium should be emended to *Chiracanthium*
Synema ,, ,, ,, ,, *Synaema*
Ozyptila ,, ,, ,, ,, *Oxyptila*
Theridion[1] ,, ,, ,, ,, *Theridium*.

24. Especially when emended names have been in usage for a long time, there can be no question of applying a rule relating to exceptions, for the purpose of validating an erroneous original spelling.

25. Since Article 19 appears to be in course of being reconsidered at the present time, I take the liberty of making some comments on the subject. I would, for instance, mention that Article 19 seems to me to have been formulated with common sense, since it means that a name given by an author must be respected but that this is subject to the condition that it is spelled correctly ; in case it is misspelled it should be emended. The nomenclaturists of 1892 saw and understood the danger of misspelled scientific names, indeed.

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[1] The question whether in this case the Original Spelling *Theridion* should be retained or whether in its place the emendation *Theridium* should be accepted has recently been under consideration by the International Commission on Zoological Nomenclature. The action to be taken in this case was the subject of an elaborate canvass of opinion among interested specialists. This showed a large majority in favour of the retention of the Original Spelling *Theridion*. In this case therefore the International Commission rejected the application submitted that it should use its Plenary Powers to validate the emendation *Theridium*. The decision so taken has since been embodied in *Opinion* 517. This *Opinion*, which will be published as Part 3 of Volume 19 of the *Opinions and Declarations* Series, is now in the press and is expected to be published at an early date. (Intl'd) F.H. 17th March 1958.

26. In spite of the clear wording of this Article which leaves no doubt about its interpretation, there are naturalists who accept the principle of the original spelling whatever this may be, that is, even if it was originally misspelled. As has been pointed out above with regard to the " Katalog " of Roewer, so to do is vicious, even harmful, since it leads to a dreadful confusion : no one knowing which spelling is the correct spelling of a scientific name.

27. I warn both zoologists and nomenclaturists against such an interpretation of Article 19. If, exceptionally, some misspelled names continue to be current (like *Argyroneta* for instance) the continued upholding of all misspelled names is entirely inadmissible.

28. This is a serious matter, and if the scientists upholding the original misspelling are more numerous than those wanting to emend it, I would ask this majority to formulate a new Article 19 according to its spirit : " The original spelling of a name must be conserved (respected) whatever mistake it may contain (barbarism, solecism, nonsense, *lapsus calami*, printing mistake). Example : *Myrmecium*, *Megamyrmaekion*, *Paramyrmecion*, *Pseudomirmession*, *Promyrmetion*." In addition, this new Article 19 would make it possible to suppress all other Articles concerning the correct formation and spelling of names, since it will guarantee all original spellings, however " original " they may be.

29. I hope that those concerned will be wise enough to conserve Article 19 as it is now formulated and will see to its application. A few exceptions have only to be considered, but not always in connection with names ending with *ion*, *ium*.

(c) Article 13 (to be modified)

30. All generic names should begin with a capital letter, all specific names (also those of sub-species and varieties) should begin with a small letter, without any exceptions.

(d) Article 15 (to be modified)

31. All generic names and all specific names when formed of two words should be spelled in one single word, without a hyphen, there is no such thing as a hyphen in Latin. (Article 15 ought thus to be modified since it provides the usage of a hyphen.)

(e) Spelling of Latin words used as specific names

32. It is proper to spell Latin words as the Romans spelled them ; their exact and accurate spelling to be found in any Latin dictionary.

33. *Polymorphism.* There are, however, words with a double spelling in the case of which the original spelling should be conserved, or sometimes the spelling which has been most used so far. Thus I advise that the words shown below should always be written as follows :

ancora (not *anchora*)
compta (not *comta*)
cothurnatus (not *coturnatus*)
egenus (not *egaenus*)
fastuosus (not *fastosus*)*
helvolus (not *helveolus*)
hesperius (not *hesperus*)
hibernalis (not *hybernalis*)
incompta (not *incomta*)
lacrimosus (not *lacrymosus*)
litteralis (not *literalis*)
litteratus (not *literatus*)
littoralis (not *litoralis*)
litturata (not *liturata*)
monstrosus (not *monstruosus*)*
nitelinus (not *nitellinus*)
obscena (not *obscaena*)
ochreatus (not *ocreatus*)
parnassius (not *parnasius*)
paululus (not *paullulus*)
paulus (not *paullus*)
pirum (not *pyrum*)
piriformis (not *pyriformis*)
pretiogus (not *preciosus*)
pyrenaeus (not *pirenaeus*)
quattuor (not *quatuor*)
silvae, arum (not *sylvae, arum*)
silvestris (not *sylvestris*)
sollers (not *solers*)
spathula (not *spatula*)
succineus (not *succinus*)
squamosus (not *squammosus*)
sulfureus (not *sulphureus*)
tescorum (not *tesquorum*)

33. Certainly the above list is not complete, and there is every reason to look for other words with a double spelling, and to indicate the correct way of spelling them.

35. There are also words which are spelled sometimes with " *ae* " some other times with " *oe* ". This comes from the fact that former authors could not always distinguish the two letters which in italics look very much alike : *æ* and *œ*. But today, with the letter *ae* used by our printers there cannot arise any confusion. Thus one should write :

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* Normally *fastosus* has priority, but *fastuosus* has been used more often, and it is the latter that should be maintained. With *monstrosus* it is the other way round, since this has been used, though *monstruosus* is older.

aeruginosus (not *oeruginosus*)
caecus (not *coecus*)
caecatus (not *coecatus*)
caelum (not *coelum*)
caelestis (not *coelestis*)
caenosus (not *coenosus*)
caeruleus (not *coeruleus*)
caesius (not *coesius*)
amoenus (not *amaenus*)
coenobita (not *caenobita*)
daemoniacus (not *doemoniacus*)
faetus (not *foetus*)
laevis (not *loevis*)*
laeviceps (not *loeviceps*)
laevigatus (not *loevigatus*)
maerens (not *moerens*)
maestus (not *moestus*)
naevia (not *noevia*) etc. . . .
poenalis (not *paenalis*)
coeptum (not *caeptum*), etc. . . . .

36. On the other hand, it is important to write the two letters joined together, since these letters are available in printing plants, in order to discriminate between them when they are spelled separately, e.g. : *aerius*, *poetica*, *coercitus*, etc. Here, the letters " a " and " e " are pronounced separately, there being no need of using a diaeresis, since there is no such thing in Latin. (See above.)

(g) Transliteration of the Latin " i "

37. There is every reason to apply the following rule :—

" i " in front of a consonant should remain " i " (*illustris*, *imperialis*, *inornatus*, . . .)

" i " in front of a vowel becomes " j " (*juncudus*, *juvenis*, *major*)

(spellings like *iucundus*, *iuvenis*, *maior* to be rejected)

Exceptions : *Io*, *ionicus*, *Iulus*.

(h) Transliteration of the Latin " v "

38. The same principle as above is involved here, but the rule is inversed :—

" v " in front of a consonant becomes " u " (*urbs*, *manus*, *Eugnatha*, *Euryopis*, . . .)

" v " in front of a vowel remains " v " (*dives*, *evectus*, *Evangelia*, *Evagrus*, *Evarcha*, . . .)

(spellings like *euectus*, *Euagrus*, *Euarcha*, to be rejected)

(i) Words formed with the prefix " sub "

38. With compound nouns the second part of which begins with a consonant, it happens sometimes (but not always) that the final " b " of the prefix is changed into the first letter of the word that follows, and thus this letter becomes double :

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* The word *levis* (light) must not be confounded with *laevis* (meaning polished, brilliant).

subcumbo—succumbo	subfascio—sufficio
subgero—suggero	submergo—summergo

40. It appears, however, that in many cases the Romans preferred the original spelling with " sub " ; that is why we advise the maintenance of this spelling (with sub) :

subflavus (not *sufflavus*)	*subfuscus* (not *suffuscus*)

(j) Spelling of modern latinised names

41. The most important question is the spelling of words in modern languages which have been latinised, these are, of course, neologisms to which it is convenient to give a Latin form by conserving the rules regulating the formation of Latin words. These modern names relate mostly to patronymics and geographical names, and they should always be spelt with Latin letters.

V. Patronymic names

42. Article 14 prescribes order for the use of patronymics for specific names ; these names should be formed by adding to the complete name of the person (to be spelt with a small initial letter) the Latin genitive : " i " for men (*cuvieri*) and " ae " for women (*merianae*) ; it is proper to add " orum " and " arum " when the dedication relates to two or more people having the same name (*berlandorum* for Mr. and Mrs. Berland ; *bonnetarum* in case of the Misses Bonnet. It is specified that in case of the person having a name which appears like a Latin name, that is, a name which can be translated into Latin (which would be the case with many Italian, Spanish and French names) the rule must be applied without exception and the names should be *bosi* (not *bovis*) *salmoni* (not *salmonis*), I would also add *pierrei* for a Mr. Pierre (and not *petri*), *poissoni* for Mr. Poisson (and not *piscis*) and it is here that we could have *sylvestrei* (with a "y ") for a Mr. Sylvestre. Patronymics ending with a vowel are not exempted (*racovitzai*, *fagei*, *pavesii*,** *caporiaccoi*, *matoui*, *kolosvaryi*) ; on the other hand, with women's names ending with an " a " it is proper to substitute " ae " for " a " and not to add it (*racovitzae* and not *racovitzaae*).

43. In spite of this rule often resulting in names sounding atrocious to a Latin ear, it is correct, since it leaves no doubt about the correct forming

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** Finally, only names ending with an " i " will form names with double " i ", line the genitives of Latin words with " ius ".

of such names. It is, however, obvious, that when making use of Latin proper nouns or Christian names, these should conserve their normal genitive : *plinii*, *aristotelis caesaris*, *antonii*, *petri*, *elisabethae*, etc. . . . but always starting with a small initial letter.

Exceptions : For patronymics ending with a " q ", (Lecoq, Duboscq, Leclercq, Stercq), a " u " has to be interposed (*lecoqui*, *duboscqui*, *leclerquae*, *stercquorum*) there are no Latin words in which the letter " q " is not accompanied by a " u ".

44. There are also modern patronymics, like *linnaei*, *fabricii podae* (and not *linnei*, *fabriciusi*, *podai*) which form an exception to the rule, as already explained above.

45. *Proper names with particles* : the particles disappear (are suppressed)

de Lessert=*lesserti*, del Pino=*pinoi*, di Caporiacco=*caporiaccoi*

du Castel=*casteli*, van Hasselt=*hasselti*, von Kempelen=*kempelini*.

46. Proper names preceded by an article, the latter should be joined to the name :—

Le Sueur=*lesueuri*, La Martinière=*lamartinieri*, De la Pérouse=*lapérousei*.

With Dutch names " de " is not a particle but an article and should be treated as such :—

De Geer ; De Haan ; Van de Poll=*degeeri*, *dehaani*, *depolli*.

47. *Names preceded by the adjective "Saint"* : in scientific names the adjective " Saint " is joined to the name with which it forms one single word which is spelt without a hyphen. In other words these names behave like ordinary names :

Saint-jean	Saint-Claire	San Juan	Santa Cruz
saintjeani	*sainteclairei*	*sanjuani*	*santacruzi*

It is, however, quite another matter if these names are used as geographic names (see paragraph 50 below).

Names with diacritic marks

48. There is need to alter Article 20 stipulating the conservation of diacritic marks, these should all be suppressed (abolished).

(a) There are no diacritic marks in Latin ; latinised names as a rule have none ; and this is a very good reason for abolishing them altogether.

(b) It is indeed superfluous to use—as do certain authors—a diaeresis with the “ i ” of names ending in “ oides ” (*sphaeroides*), the Romans had no such mark and as a rule pronounced it “ o-ides ”.

(c) The study of names deriving from words with a diaeresis shows that this mark is almost never reproduced except in countries where it is normally used. As a matter of fact, printers of other countries having no such type, the diaeresis cannot be printed. This second point, a very practical one, is another good reason for suppressing the mark altogether.

(d) Further, Article 20 stipulates—in a contradictory manner as it were, the transliteration of the German “ ä ”, “ ö,” and “ ü ” into “ ae ”, “ oe ” and “ ue ”. When abolishing a certain mark, it is advisable to abolish (suppress) the same mark totally.

(e) There is no inconvenience whatsoever in suppressing these marks, since the letters having them can, as a rule, be replaced by Latin letters having exactly the same sound :

Guérin (*guerini*)
Châtelain (*chatelaini*)
Lalaguë (*lalaguei*)
Bäbler (*baebleri*)
Forskål (*forskoeli*)
Sánchez (*sanchezi*)
Bégué (*beguei*)
Bûche (*buchei*)
Theïs (*theisi*)
Göldi (*goeldi*)
Sørensen (*soerenseni*)
Pérez (*perezi*)
Lacépède (*lacepedei*)
Lhôpital (*lhopitali*)
Laënnec (*laenneci*)
Müller (*muelleri*)
Trägårdh (*traegoerdi*)
Colón (*coloni*)

(f) For marks with some difficulty in transliteration, I would suggest the following equivalents :

(α) Spanish “ ñ ” : After having studied the problem, I think that it is proper to substitute for this letter the syllable “ ni ” as in the Latin word *Hispania*

Núñez : *nuniezi** Español : *espanioli*

At any rate, this spelling is very much to be preferred to the spelling *nunezi* or *espanoli* if the printer does not dispose of a type “ n ” with the tilde. (See : *Bull. Soc. entom. France* 59 (5/6) : 84).

(β) Portuguese tilde : The normal phonetic transliteration of this sign into “ a'on ” would alter the meaning too much. It would therefore be better to suppress the tilde altogether :

Mello-Leitão=*leitaoi*.

(γ) French and Portuguese “ ç ” : this should be replaced by “ ss ” when between two vowels, and by one single “ s ” when the preceding letter is a consonant. Two hundred years ago the first nomenclaturists already resolved this problem by writing *curassaviensis* for the adjective formed of " Curaçao ". On this model it is proper to spell *assorensis* (for Açores), *mossambicus* (for Moçambique) and *fransoisi* (for Mr. François) the latter spelt like this being anyway an old French word.

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* This instance given in Article 14 of the *Règles* reveals the difficulty inherent, since one spells *nuñezi* whilst one should spell *núñezi*. When wanting to respect the accents, one should have had respect for them both !

(δ) Diacritic and tonal marks in Czech, Hungarian, Rumanian, Polish and other languages : Since there are a great number of these it should be the scientists of the countries concerned who should decide about the official transliteration of the stressed letters.

At the present time it would be advisable to suppress the accents altogether and for good reason :

Kulczyński=*kulczynskii* Kolosváry=*kolosvaryi*

I would, however, point out that the Czech " č " should be transcribed as " tch " and the Rumanian " ş " as " sch " :

Polaček=*polatcheki* Roşca=*roschcai*

(ε) *Apostrophe* : in French, in Italian and in English and, no doubt, also in other languages the apostrophe marks the omission of one or two letters respectively, as a rule to avoid a hiatus. In France the apostrophe is used in first names formed from common nouns preceded by the article " l' " ; in the case of scientific names formed after such names the apostrophe should be omitted and the article should become joined to the proper name :

L'Homme,	L'Héritier,	L'Hermitte,	De L'Écluse,	L'Hoste
lhommai,	*lheritieri,*	*lhermittei,*	*leclusei,*	*lhostei*

In English the apostrophe is found in patronymics beginning with the particles " Mac " and " Of " which are shortened into " M ' " and " O' " but which are inseparable from the names themselves.

For Mac whether abridged to " Mc " or " M' " it is advisable to re-establish the particle in its entirety, since the words spelt *mccooki* or *m'cooki* cannot be pronounced in Latin, it is therefore necessary to spell *maccooki*.

For O', it is advisable to integrate this particle to the name proper by suppressing the apostrophe, as with the French article " l' " :

O'Connor	O'Neill
oconnori	*oneili*

49. *Conclusion* : As can be seen from the foregoing, these provisions suppress, without any exception, all diacritic and tonal marks in all the various languages, advocating thus a certain homogeneity of spelling of scientific names in accordance with the Latin spelling (orthography). I firmly believe in this being the best solution ever, and wish other workers to follow my path.

50. *Geographical Names* : This is a very important subject. See *Bibliographia Araneorum*, volume 2, pp. 56–75.

51. *Formation of compound scientific names* : This also is a very important question. See *Bibliographia Araneorum*, volume 2, pp. 77–85.

52. *Formation of scientific names preceded by numerals (either numeral letters or figures)* : See *Bibliographia Araneorum*, volume 2, pp. 85–88.

53. *Hyphen in compound names* : What is required is the reverse of that prescribed in Article 15 of the *Règles*. See *Bibliographia Araneorum*, volume 2, p. 88.

54. *Generic names with "um" and "on"*. Transcription of the Greek final letters *ον* and *ων*. There are a great number of scientific names ending with " on " and " um ". These two must not be confounded, and yet there are many scientific authors who do so. Thus we get names which were originally misspelled and were emended at a later date, that are now spelled in two different ways :

Theridion and *Theridium*	*Myrmecium* and *Myrmecion*
Zodarion and *Zodarium*	*Apion* and *Apium*, etc.

55. Yet this is a simple enough question, and it would be a good thing for naturalists to observe the following rule when using, or for that matter creating, names with these endings. In Latin : " um " (genitive : " i ") is the ending used for neuter (gender) names (*templum, bellum, caecum, podium, museum, ornamentum*, etc.) and obviously there are no patronymics in this category. " On " (genitive : " onis ") is an ending for masculine words (*aeon, canon, ancon, andron, lycaon, eon*, etc.) and there are, of course, many patronymics with this ending. (*Arion, Philemon, Samson, Sarpedon, Simeon, Orion, Platon*, etc.*)

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* All words ending with " -odon " should also be considered as being masculine in gender. For example, *Mastodon, Iguanodon*, etc., as well as words formed of various parts without a meaning and with the termination " -on " (*Caedmon* ; *Nodocion*, etc.).

56. The endings " um " and " on " correspond to the Greek terminations *ον* and *ων*, as follows :

	Latin	*Greek*
masculine :	*on*	*ων*
neutral :	*um*	*ον*

Thus there is no doubt that all Greek words ending with *ων* should give Latinised names with the ending " on " and take the masculine gender, and that all Greek words with the ending *ον* should be latinised into " um " and take neuter gender.

57. It is evident also, since it is only logical, that the same letters should always be transliterated in the same manner. Thus, if *χειραχάνθιον* is transcribed as *Chiracanthium*, then *θηριδιον* should be transcribed as *Theridium*. It would be illogical to spell the latter word *Theridion*. I sincerely hope that naturalists generally will be of the same opinion. Like myself, they will be indignant that in one and the same scientific work the name *Myrmecium* should even today be spelled as *Megamyrmaekion* and as *Paramyrmecion*.

58. On the other hand the fact must be faced that there are hundreds (perhaps even thousands) of names ending in " on " and " um ", it is of the utmost importance that these should conform to the rule that I have just formulated, all the more as a great number of them must have the two orthographies :

(a) If they end in " on " they must be of masculine gender
,, ,, ,, ,, "um" ,, ,, ,, ,, neutral ,,

(b) If they are of masculine gender they must end in " on "
,, ,, ,, ,, neutral ,, ,, ,, ,, ,, " um "

59. Once this rule is observed, everyone will see clear in the matter, and will at last know the correct spelling of the name used, as well as its correct grammatical concordance. One will no longer see such names as *Susarion neglectum* (for *Susarion neglectus*), or *Apium violaceus* (for *Apion violaceus*), or *Theridion denticulatus* (for *Theridium denticulatum*).

60. In araneidology the three important names with two different spellings are : *Theridium* (*Theridion*), *Myrmecium* (*Myrmecion*), *Zodarium* (*Zodarion*) names derived from Greek words ending with *ον* they are therefore of neuter gender and must be latinised into names with " um ". There cannot be otherwise.

CONCLUSIONS

61. I sincerely hope the International Congress on Zoology will adopt all these principles set out above and will thus contribute to a certain homogeneity in the spelling of generic and specific names in zoology being achieved.

62. It is important that on all the above questions precise and clear rules should be formulated, and that zoologists of all countries should be furnished with a small booklet containing these rules in their own languages. I am firmly convinced that within a short time all naturalists—who by their very nature like order and accuracy—will concur, happy enough no longer to have to deal with delicate and even puzzling problems.

63. It is equally important to oppose the multiplication of individual cases : when there are too many exceptions the rules simply disappear.

64. It is above all absolutely necessary to reject all originally misspelled names which are not in accordance with the principles of the Latin language and with those of rules of latinisation, small, insignificant errors must be rejected just as well as the appalling ones.

65. Once everything is emended, everything clarified, there will be no longer need for discussion, and that will be the end of it all. We shall have a perfect nomenclature and a final one too—for the greater good of all concerned.

66. On the other hand, if the Congress does not formulate hard-and-fast rules concerning the spelling of scientific names—there will be no end of trouble. There will always be opponents, since there are always some who do not want to conform to regularity and accuracy. And thus the greatest incoherence will continue to exist in nomenclature.

CASE No. 29

DRAFT " RÈGLES ", ARTICLE 28, SECTION 15: TREATMENT OF NUMERALS IN COMPOUND WORDS

(Commission Reference : Z.N.(S.) 1311)

(For the relevant provision in the Draft of the Revised *Règles* see 1957, *Bull. zool. Nomencl.* **14** : 222)

DOCUMENT 29/1

Proposed substitution of a revised text for Article 28, Section 15, relating to the treatment to be accorded to numerals in compound words

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Proposal received on 25th January 1958)

Correspondence with Professor Charles H. Blake of the Massachusetts Institute of Technology has brought out the fact that the Paris enactment (1950, *Bull. zool. Nomencl.* **4** : 199, Minute 10) is both inadequate and in part faulty Latin. For example, the discussion preceding that enactment implies that " *quadri-* " is an ordinal, which it is not, the ordinal being *quartus*. " *Quadri-*", " *quadrin-* ", or " *quatri-*" are combining forms of " *quattuor* " (*cf. quadridens* [*quattuor-dens*], *quadringenti* [*quattuor-centum*], *quatriremis* or *quadriremis* [*quattuor-remus*]). These forms are more frequently found in Latin in compounding words than is *quattuor*, which is almost restricted to the numeral *quattuordecim*. For some reason, unknown to me, at least my old edition of Andrews' Latin Lexicon spells *quattuor* and all its compounds with a single " t ". Professor Harry Caplan assures me that *quattuor* is correct.[1]

2. The use of the cardinal adjective *duo* in compounding is almost restricted to the numeral *duodecim*, the adverb *bis* (combining form *bi-*) being almost exclusively employed in such a connection. The second sentence of the rule that follows, dealing with *bis*, could, however, be made a recommendation if that is thought better. Both the cardinal adjective *tres* and the adverb *ter* are used in Latin compounds, but, as each usually takes the combining form " *tri-* ", no confusion arises.

3. After the manuscript of the Draft of the *Règles* had been submitted for publication, I prepared a revision of Section 15(a) of Article 28 but by some mischance it was mislaid in transit and I now submit as a replacement.

4. I wish to express my indebtedness to Professor Harry Caplan, Professor of Classics in Cornell University, for verifying the correctness of the statements made.

Revised text proposed to be adopted for Section 15(a) of Article 28 of the Draft of the Revised " Règles "

(a) **Treatment of numerals in compounds.**—If the first element of a compound name is a cardinal numeral it shall be written as a word using a correct combining form, and coalesced without a hyphen. The adverb *bis* (*bi-*) shall replace the adjective *duo*.

Examples : *Unicornis* (not 1-*cornus* nor *unuscornis*), *bimaculatus* (not 2-*maculatus*, *duomaculatus*, nor *bismaculatus*), *trimaculatus* (not 3-*maculatus*, *termaculatus*, nor *tresmaculatus*), *quattuorguttatus* or preferably *quadriguttatus* (not 4-*guttatus*), and *septendentatus* (not 7-*dentatus* nor *septemdentatus*).

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[1] In the latest (1945) impression of Lewis & Short's *Latin Dictionary* this word is entered (: 1508) as " *quattuor*, less correctly *quatuor* " (intld. F. H. 27th January 1958).

CASE No. 30

DRAFT " RÈGLES ", ARTICLE 28, SECTION 13 : RULE GOVERNING THE GENDER TO BE ATTRIBUTED TO INFRA-SUBSPECIFIC NAMES WHEN CONSISTING OF ADJECTIVES

(Commission Reference : Z.N.(S.) 1292)

(For the relevant provision in the Draft of the Revised *Règles* see 1957, *Bull. zool. Nomencl.* 14 : 220–221)

DOCUMENT 30/1

Proposal that a provision be inserted in the " Règles " that adjectival infra-subspecific names should be cited in the feminine gender

By **ERICH M. HERING**

(*Zoologisches Museum der Humboldt-Universität zu Berlin*)

(Enclosure to a letter dated 16th December 1957)

It is provided in the Revised Draft of the English text of the *Règles* (Article 28, Section 13) that in the matter of gender an adjectival infra-subspecific name should be subject to the same rules as specific and subspecific names, that is, that the gender to be used for an adjectival infra-subspecific name, when an adjective, shall be whatever is the gender of the generic name with which that infra-subspecific name is combined,

2. I submit that this provision is misconceived and should be modified before the text of the Revised *Règles* is finally approved. An infra-subspecific name is not a name of the same category as specific and subspecific names but is the name of an entirely different kind and is subject to a separate and independent series of rules. Moreover, when used, an infra-subspecific name constitutes only a qualified trinominal name (where no subspecific name is cited) or a qualified quadrinominal name (where it is cited in connection with a trinominal subspecific name). This qualified character is clearly—and rightly—indicated by the provision (in Section 4 of Article 4 of the Draft) that an infra-subspecific name, when cited, is to be separated from the remainder of the name by the interposition of the word " form " preceded by a mark of punctuation (i.e. by a comma).

3. The respect in which an infra-subspecific name constitutes a qualified name is that, unlike a specific or subspecific name, each of which is grammatically dependent upon the generic name, an infra-subspecific name is not so dependent, being dependent upon some such Latin word as the word " forma ". The word so used is in English " form ", in French " la forme ", in German " die Form ", in Italian " la forma " and in Spanish " la forma ". As already noted, the Latin word now most commonly used in this context is the word "*forma* " ; formerly, however, the Latin words " *varietas* " and " *aberratio* " were widely used in this connection and are still so used by some authors.

4. The Latin words (and also the vernacular words) used to denote infra-subspecific names have one extremely important feature in common. This is that they are all of the feminine gender. The settled practice of those zoologists who use infra-subspecific names is to cite those names in the feminine gender. Thus, the use of the feminine gender for adjectival infra-subspecific names is not only correct in itself but is also in harmony with the practice of taxonomists.

5. I accordingly recommend that Section 13 of Article 28 of the Draft of the *Règles* should be amended to secure the above end. Sub-paragraph (1) of Section 13 would become very involved and difficult to follow if an attempt were to be made to introduce in it the required qualification as to the gender in which adjectival infra-subspecific names are to be cited. I consider therefore that the simplest and most convenient course would be to deal with this matter in a separate subparagraph of Section 13 of the above Article.

6. The suggestion which I now put forward is therefore :—

(1) that on page 220 the opening words of Section 13 of Article 28 should be amended to read :—"A specific or subspecific name shall be . . . " ;

(2) that on page 221 the following new item be inserted before the item which now appears as " (a) Initials " :—

(a) *Infra-subspecific names* : An infra-subspecific name shall be subject to the same rules as specific and subspecific names, except that, when such a name consists of a word which is an adjective, it shall be cited in the feminine gender in grammatical agreement with the Latin word "*forma*", either expressed or understood.

(3) that the items which at present appear on page 221 as (a) and (b) be re-lettered as (b) and (c) respectively.

CASE No. 31

DRAFT " REGLES ", ARTICLE 4, SECTION 4 (CITATION OF NAMES OF INFRA-SUBSPECIFIC FORMS)

(Commission Reference : Z.N.(S.) 1313)

(For the relevant provision in the Draft of the Revised *Règles*
see 1957, *Bull. zool. Nomencl.* **14** : 41)

DOCUMENT 31/1

Proposed substitution of Revised " Examples " in Section 4 of Article 4 of the Revised " Règles "

By **ERICH M. HERING**

(*Zoologisches Museum der Humboldt-Universität zu Berlin*)

(Enclosure to a letter dated 16th December 1957)

In the existing draft of the Revised text of the *Règles* (*Bull. zool. Nomencl.* **14** : 41) two examples are given of the method to be followed in citing infra-subspecific names. These examples are as follows :—

Rana esculenta, form *y-us*

Rana esculenta marmorata, form *x-us*

2. Further it is provided in Section 13 of Article 28 of the Draft that adjectival infra-subspecific names are to be cited in grammatical agreement with the name of the genus in combination with which those names are cited. Thus,

under the rule suggested in Article 28 the " Examples " cited in Section 4 of Article 4 are both incorrect, for in each case the notional infra-subspecific name (*y-us* and *x-us*) is cited in the masculine whereas the generic name (*Rana*), with which these infra-subspecific names are combined, is feminine in gender. For this reason alone these " Examples " are in need of correction.

3. In another paper which I am submitting today[1] I have given grounds for considering that the proper course—as also the course in harmony with general usage—would be for the Congress to amend Section 13 of Article 28 of the Draft of the Revised *Règles* (1957, *Bull. zool. Nomencl.* **14** : 220–221) so as to provide that an adjectival infra-subspecific name should be cited in grammatical agreement not with the generic name with which it is combined but with the word " forma ", either expressed or understood. I have therefore recommended that all such adjectives should be cited in the feminine gender. If, as I hope, this proposal is adopted by the Congress, it would constitute an additional but quite different reason for amending the " Examples " which at present appear in Section 4 of Article 4 of the Draft of the Revised *Règles*.

4. In order that there should be no ambiguity as to the relation of Article 4, Section 4, to Article 28, Section 13, as now proposed to be amended, it would, I think, be an advantage if the " Examples " cited in Article 4 were based upon a case where the generic name was masculine in gender. I accordingly suggest that in Section 4 of Article 4 the existing " Examples " be replaced by the following :—

(i) Section 4 (a) : *Parnassius tianschanicus* Oberthür (C.), 1879, forma *connexa* Schultz (O.), 1890 ;

(ii) Section 4 (b) : *Parnassius tianschanicus tianschanicus* Oberthür (C.), 1879, forma *connexa* Schultz (O.), 1890.

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[1] See Case No. 30, Document 30/1, pp. 664–667 of the present Part.

CASE No. 32

DRAFT " RÈGLES ", ARTICLE 24, SECTION 12, AND ARTICLE 28, SECTION 16 (SPECIFIC NAMES CONSISTING OF LATINISED MODERN PATRONYMICS IN THE GENITIVE SINGULAR) : LIABILITY OF, TO EMENDATION, AND STATUS UNDER THE LAW OF HOMONYMY OF VARIANT SPELLINGS WITH "-i" AND "-ii" TERMINATIONS, AND LIABILITY OF, TO EMENDATION

(Commission Reference : Z.N.(S.) 1162)

(For the relevant passages in the Draft of the English text of the Revised *Règles* see 1957, *Bull. zool. Nomencl.* **14** : 181 & 224)

DOCUMENT 32/1

Proposed clarification of the Copenhagen Congress Decision regarding specific names published with " -i " and " -ii " terminations (a) under the Law of Homonymy, and (b) in relation to liability to emendation

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 3rd February 1958)

It will be recalled that the Copenhagen Congress in 1953 repealed a decision by the Paris Congress of 1948, that, where a specific name based on a latinised version of a modern patronymic of a man is formed in the genitive singular with a termination consisting of a double (" -ii "), such as *smithii*, the name so formed should be subject to automatic correction by the deletion of the second " i ", the name *smithii*, for example, being thus corrected to " *smithi*". In place of the foregoing the Copenhagen Congress decided to insert in the *Règles* a provision that in such a case " the terminations " -i " and " -ii " are permissible variants, the differences between them having no nomenclatorial significance " (1953, *Copenhagen Decisions zool. Nomencl.* : 54, Decision 91).

2. Experience since the Copenhagen Congress has shown that the foregoing decision is not satisfactory in its present form, its meaning being ambiguous in one respect. Moreover, the decision is incomplete, in that it does not deal with the status of variant spellings of the above kind under the Law of Homonymy. It seems desirable that, when the forthcoming London Congress deals with this subject in its examination of the Draft text of the English text of the Revised *Règles*, it should take the opportunity of dealing with both the defects referred to above.

3. The questions for decision are the following :—

(a) Does the expression " permissible variants " :—

(i) mean that it is equally correct to use either the termination " -i " or the termination " -ii ", irrespective of which of those terminations was used by the original author of the specific name ? In other words, if a name is published as " *smithii* " is it permissible for a later author to cite that name in the corrected form " *smithi* " ?

or

(ii) mean that it is equally permissible to publish a specific name as " *smithii* " or as " *smithi* " but that, once such a name has been published with one or other of the above terminations, the termination so used is not subject to change by later authors and that, if a name published as *smithii* is emended to *smithi*, the emendation so published is an Invalid Emendation ?

(b) What is the position within a single genus of a pair of names based on a modern patronymic and differing only in that in one case the termination " -i " is used and in the other the termination " -ii " ? Do such names rank as homonyms of one another ?

4. I have had correspondence on this subject with Dr. W. I. Follett (*California Academy of Sciences, San Francisco, California, U.S.A.*), by whom the problems at issue were brought before the Committee on Nomenclature of the American Society of Ichthyologists and Herpetologists and the Committee on Nomenclature of the (American) Society of Systematic Zoology. The letters exchanged are attached to the present case as follows :—

(i) Letter from Dr. Follett dated 8th September 1956 (Document 32/2) ;

(ii) Reply by myself to Dr. Follett dated 17th September 1956 (Document 32/3) ;

(iii) Letter dated 10th July 1957 from Dr. Follett, setting out the views of the Committees on Nomenclature of the two Societies referred to above (Document 32/4).

5. It will be seen from the foregoing correspondence that a majority of the members of both Committees consider that in a case such as the present the original form of a name, whether (say) *smithii* or *smithi*, should be retained and that an emendation later published—say, from *smithii* to *smithi*—should be treated as an Invalid Emendation. On the question of the position of such names under the Law of Homonymy there was no dissent in either committee from the proposition that within a single genus names such as *smithii* and *smithi* should be treated as being homonyms of one another.

6. I believe that the first of the above views will be regarded as reasonable by the majority of zoologists and that all will adhere to the second. I accordingly recommend that provision on these lines be made in the Revised *Règles* as follows :—

(1) Article 24, Section 12, Insert the following new sub-paragraph :—

> (13) the terminations " -ii " and " i " in the case of a specific name based on the modern patronymic of a man ;

(2) Article 28, Section 16(b)(ii) : At end insert the following :—

> . . . but once such a name has been published, the termination then used is to be retained and shall not be liable to emendation.

DOCUMENT 32/2

On the question of the relative status of specific names based on modern patronymics and having either the termination "-i" and the termination "-ii" respectively

By **W. I. FOLLETT**

(*California Academy of Sciences, San Francisco, California, U.S.A.*)

(Letter dated 8th September 1956)

Dr. William A. Gosline, of the University of Hawaii, who is the Ichthyological Editor of *Copeia*, has presented the following question regarding the proper interpretation of the provision of *Copenhagen Decisions zool. Nomencl.*: 54, Decision 91, to the effect that " *-i* " or " *-ii* " as terminations of the genitive singular shall be deemed permissible variants without nomenclatural significance:

Does this provision mean that the original author is permitted to use the termination " *-i* " or " *-ii* " as he may prefer, but that subsequent authors must adhere to the usage employed by the original author, since a change from " *-ii* " to " *-i* " by a subsequent author would constitute an invalid emendation under the provisions of *Copenhagen Decisions zool. Nomencl.*: 44, Decision 71(2)(a)(ii)?

It would seem to me that if " *-i* " and " *-ii* " are variants without nomenclatural significance, a change from one to the other could not constitute an emendation, valid or invalid, and therefore that subsequent authors must now be at liberty to change an original " *-ii* " to " *-i* " or vice versa without transgressing the rule against invalid emendations.

My longhand notes, taken at the Copenhagen Colloquium on August 4 1953, also suggest this interpretation. They read as follows:

> " Case 15: Mr. Hemming proposes that Paris enactment revoking *Opinion* 8 be reversed, and that the original orthography be retained to date. For future, a Recommendation against " *-ii* ".

Dr. Hubbs suggests adherence to original spellings in " *-ii* ". The mandatory provisions of Article 14 would then be restricted to subdivisions a, b, and c, plus barbarous words and arbitrary combinations of letters.

Prof. Bradley moves use of " *-i* " or " *-ii* " permissible variant of no significance in homonymy or any other sense.

Mr. Hemming suggests reinstating fifth paragraph of Article 14 as a mandatory provision and then adopting Prof. Bradley's proposal. Approved."

Since this question has been raised, it would seem desirable that the forthcoming rules expressly state that a change from " *-ii* " to " *-i* " is not to be deemed an emendation.

DOCUMENT 32/3

The Copenhagen Decision on specific names based on modern patronymics and having the terminations " -i " and " -ii " respectively

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Letter to W. I. Follet dated 17th September 1957)

Many thanks for your letter of 8th September (and also your letter of 2nd April last) on the above subject.

I am interested that you should have raised this matter, because from quite a different point of view—namely, from that of the preparation of my projected work on palaearctic butterflies—I have myself been thinking about the same matter.

I am of the opinion that on the basis of existing decisions, it is not possible to give an absolutely cut-and-dried answer to the question here involved. By way of a start, it may be convenient briefly to recall the history of this matter, namely :—

(a) The Berlin *Code* of 1901 provided in Article 14 that where a specific name is based upon a modern patronymic in Latinized form as a genetive singular, it is to be constructed—if the person so honoured is a man—by adding the termination " *-i* " to the exact form of that person's name. The Berlin *Code* did not, however, state explicitly what was to be done if, notwithstanding the above decision, a name of the above kind was incorrectly formed with a double " *-ii* " termination, i.e. if the author forming such a name were in doing so to assume that the nominative singular of the Latinized version of the name of the person to be honoured ended with the termination " -ius " and not the termination " -us ",

(b) In 1910 there was published an *Opinion* (*Opinion* 8) in which the Commission ruled that a specific name of the above type, if formed with an incorrect termination, i.e. with " *-ii* ", notwithstanding the provisions of Article 14, should be retained.

(c) In 1948 the Thirteenth International Congress of Zoology of Paris repealed the Ruling given in *Opinion* 8, and inserted in the *Règles* a provision that a name incorrectly formed as, say, *smithii* was to be subject to automatic correction to *smithi*.

(d) Then came the discussion at Copenhagen in 1953 at which you were present and to which you refer in your letter, the decision of that Congress being set out in paragraph 91 of the work " Copenhagen Decisions on Zoological Nomenclature ".

In examining the Copenhagen decision cited above, we must take into account the generality of that decision, and avoid falling into the error of confining the argument to a particular sentence picked out of that decision. If we view that decision in the foregoing light, we see that it provides (i) that a specific name based on a patronymic such as *Smith* ought to be formed as *smithi*, (ii) that if notwithstanding (i) above such a name is formed as *smithii* the termination so employed, i.e. the termination " *-ii* " is to be treated as permissible variants of the form with the single " *i* " termination, and (iii) that a *Recommandation* is to be inserted stating that the " *i* " termination is to be preferred to that consisting of " *ii* ".

Several problems are raised by this decision, namely :

(1) What is the position if within a single genus there are two species, one having the name *smithi*, and the other having the name *smithii* ? My own view is that such names should certainly be regarded as homonyms of one another within a single genus, and that the later published of any two such names ought to be rejected as a junior homonym of the other. This seems to me to be implicit in the Copenhagen decision. It is, however, a matter which I think should be made explicit when the final draft of the revised Code comes to be considered.

(2) If a name is published as *smithii*, what is the status of the name *smithi* if some later author alters the name so as to get rid of the " *ii* " termination ? This matter is not dealt with at all in the Copenhagen Decisions. It seems to me, however, that it would reasonably follow from the provision that the double and single " *i* " terminations are to be treated as " permissible variants " of one another that in such a case the Original Spelling, whether with a single " *i* " or with " *ii* " termination, must be regarded as being the " Valid Original

Spelling ". What then is the position when a name published as *smithii* is altered by a later writer to *smithi* ? My belief is that on the wording of the Copenhagen decision a later variant *smithi* of a name originally published as *smithii* should be regarded as an Invalid Emendation of *smithii*. I believe, however, that this conclusion is not that which was intended by the Copenhagen Congress, see (3) below.

(3) Under this head we come to an aspect of the problem which I have been considering from the point of view of my own work, namely : Is a later author—for example myself, in compiling my book on the palaearctic butterflies—at liberty to alter " *ii* " terminations to " *i* " terminations or is he not ? If I had asked myself this question at the close of the discussion at Copenhagen, I would certainly have given the answer " yes ", basing my view on the decision of the Congress that the single and double " *i* " terminations are to be regarded as " permissible variants ". For the reasons explained above I now, however, consider that the words actually employed in the Copenhagen decision are such that the single and double " *i* " terminations are to be regarded as permissible variants at the time of the original publication of the name, but that once such a name has been published the original spelling, whichever it may be, is the Valid Original Spelling, and is not subject to change. This is an important practical question from the point of view of anyone writing books or papers, and it ought certainly to be cleared up one way or another by the London Congress of 1958 when it comes to consider the revised text of the *Code*.

I have answered your letter at some length, because I wanted to put the various issues clearly before you in order that, as I hope, you will be kind enough (i) to let me know whether you agree with the factual analysis set out above, and (ii) on the basis of your view on that analysis to inform me of your view as to the nature of the clarifications which it is desirable should be made by the London Congress.

In order to ensure that this matter is not overlooked, I have as you see, opened a special file for its consideration, and have in addition entered it as an item on the agenda for the consideration of the London meeting.

DOCUMENT 32/4

Views of the Committees on Nomenclature : (a) of the American Society of Ichthyologists and Herpetologists ; and (b) of the Society of Systematic Zoology on the relative status of specific names based on modern patronymics having the terminations " -i " and " -ii " respectively

By **W. I. FOLLETT**

(*California Academy of Sciences, San Francisco, California, U.S.A.*)

(Letter dated 10th July 1957)

Under date of 8th September 1956, I wrote you with regard to Dr. William A. Gosline's query as to the proper interpretation of the Copenhagen decision on the subject of specific names ending in " *-ii* " and " *-i* ". You very kindly replied at some length, and on 26th September 1956, I sent a copy of your letter to each member of the committee on zoological nomenclature of the American Society of Ichthyologists and Herpetologists. In view of the importance of the problem, I also sent a copy of your letter to each member of the nomenclature committee of the Society of Systematic Zoology. The following comments are now available :

1. **Dr. Robert R. Miller** (*University of Michigan, Ann Arbor* ; *ASIH committee*) :

> The factual analysis set forth by Mr. Hemming has technical reasonability although, as he states, the conclusion reached (that emendation of a name originally published as *smithii* to *smithi* constitutes an invalid emendation) is not that which was intended by the Copenhagen Congress.
>
> I find this " -ii " or " -i " situation not only annoying but surely trivial, and the sort of thing which puts the taxonomist in bad light with other biologists. It seems to me that the importance of the first appearance of names of this type (indeed, names in general) is greatly overemphasized and thereby the name attains an undeserved sanctity. We should also guard against the vacillating practice which, particularly

in recent years, has led some colleagues to state " Why follow the Rules when the Commission will probably change them again at the next Congress ? "

Such spellings as *Salmo clarki* and *Salmo gairdneri*, for example, have now been widely adopted in fish and fishery literature and the prospect that we may have to return again to the original spellings of *S. clarkii* and *S. gairdnerii* is depressing.

I therefore urge the Commission to maintain the intent of the Copenhagen Congress that " -ii " and " -i " are permissible (interchangeable) variants (personally I would prefer to see " -i " as mandatory), without significance in homonymy, and that by " permissible variants " is meant interchangeable usage by both original and subsequent authors.

2. Dr. James A. Peters (*Brown University, Providence, Rhode Island*; *ASIH committee*):

The most important consideration is that our committee be able to present a uniform decision on this matter. There are currently such a multitude of possibilities, both in actual available rules and in interpretation thereof, that both we and the International Commission will eventually be forced to a middle-of-the-road decision, I am sure.

The two extreme possibilities, as I see them, are first to have complete interchangeability of " -i " and " -ii ", and names differing only in these terminations have absolutely no nomenclatural significance, regardless of when formed, used, or changed. They are homonymous but equivalent, and either could be used by any author. This comes close to being the spirit of Copenhagen—at least as I read it. The opposite possibility is absolute fixation as originally published, regardless of termination, and no alteration is allowed at any time. The name must be left as published. This is the apparent attitude in 1910.

I am not in favor of either extreme myself. In the interests of stability, but also in the interests of ease of usage, I would suggest the following points:

(1) Any original spelling prior to the publication of the new rules should be retained, as originally published. Thus, any " -ii " spelling could not be altered to " -i ", or vice versa.

(2) Any name published after publication of the new rules must be formed from the actual name of the person plus " -i ". This is to be true regardless of the termination of the actual name, i.e., whether it be " -e ", " -y ", or " -i ".

(3) Any name published after publication of the new rules with either an incorrect spelling of the actual name or with " -ii ", or with both, is to be changed in its next published form to conform with paragraph 2.

(4) Any names differing only in the " -i " and " -ii " terminations are to be considered homonymous, whether synonymous or not, and regardless of time of publication before of after any or all rules.

Under these circumstances, *Rana boylii* remains *R. boylii*, *Sceloporus jarrovii* remains *S. jarrovii*, and *Alsophis vudii* is still *A. vudii*. These names, as perpetuated, recognize the classical nature of the scholarly approach by our forebears.

If, however, any of these names were to be published after the publication of the revised rules, the first would become *Rana boylei*, the second *Sceloporus yarrowi*, and the third *Alsophis woodi*. These names, as revised, recognize the absence of a classical nature and ability on the part of most modern systematists. This latter fact is something which we must recognize, I believe. The classical value has gone out of the scientific name—it is now primarily a handle. Any battle to perpetuate classical usage is likely to prove a losing one.

3. Dr. Jay M. Savage (*University of Southern California, Los Angeles; ASIH committee*):

I am delighted to see that you have been able to get an extended report on the " -ii " versus " -i " from Mr. Hemming. It is also refreshing to note that he realizes some of the confusion arising from the conflicting and contradictory rulings on this matter made at Paris and Copenhagen. Although, I do not discern any error in his factual analysis of the history of this problem, I do not see that the history is important. What is really significant is a decision on how to resolve this difficult and truly embarassing problem by sound clarification at the London Congress. Actually, these clarifications ought to be made in the rules should they be published before the Congress.

In any event I would like to see our Committee examine the following points as a starting point for clarification of the situation. Some of these agree with Mr. Hemming's general but tentative conclusions in his letter to you of 17th September 1956, relating to Z.N.(G) 69 and Z.N.(S.) 1162.

(1) The valid original spelling of a patronymic must stand as the way that it was originally spelled. This could be either " -i " or " -ii ".

(2) Any subsequent change in the ending must stand as an Invalid Emendation.

(3) It should be inserted in the Rules that the " -i " ending must be used and that the double " -ii " cannot be used for any name proposed after 1958, unless it is a name like *orsinii* based on the name Orsini.

(4) Finally, as pointed out to you in my letter of 7th January 1956, these rulings should also apply to patronymics based on names ending in " -e ", " -y ", or " -i ".

After a good kicking around by our Committee and with additions or changes by us, we ought to then present our recommendations to Hemming.

4. Dr. Hobart M. Smith (*University of Illinois, Urbana*; *ASIH committee*):

I was very pleased to see Mr. Hemming's discussion of the " -ii " versus " -i " terminations. This makes it quite evident that the problem has not yet been dealt with decisively by present criteria.

So far as the factual analysis given by Mr. Hemming is concerned, I cannot voice reasonable objection. I think I would not independently conclude that the wording of the Copenhagen decisions necessarily requires that " a later variant *smithi* of a name originally published as *smithii* should be regarded as an Invalid Emendation of *smithi* ". Nevertheless, Mr. Hemming's interpretation clearly is a reasonable possibility, and because of that a restatement of intent should be obtained from the Commission at the earliest opportunity.

So far as sentiment is concerned, I still strongly prefer (a) that the " -ii " and " -i " terminations be regarded as permissible variants at any time if the original spelling is " *-ii* " (not if it is " *-i* "). the latter being a Valid Subsequent Spelling, the former the Valid Original Spelling, and that (b) the recommendation be made that the " -i " termination is to be preferred both Originally and Subsequently.

5. Mr. W. I. Follett (*California Academy of Sciences, San Francisco*; *ASIH and SSZ committees*):

When I first wrote to you on this subject (8th September 1956), I believed that subsequent authors were at liberty to change an original " *-ii* " to " *-i* " without transgressing the rule against Invalid Emendations. You have presented logical grounds for holding otherwise, and I am pleased with the result of your reasoning. It has long been my contention that the original orthography affords the only criterion that is wholly objective (*Bulletin of Zoological Nomenclature*, **10**(7) : 215). I am convinced that the uniformity attained in relatively simple cases involving the terminations " *-i* " and " *-ii* " is more than outweighed by the uncertainty introduced in evaluating the more difficult cases that involve those terminations, as exemplified in Dr. Hubb's letter, infra. I should therefore favor a clear expression of the following rules with regard to specific names heretofore published : (1) that the original orthography (with respect to the terminations " *-i* " and " *-ii* ") must be retained : (2) that a change of the termination from " *-ii* " to " *-i* ", by a subsequent author, is to be deemed an Invalid Emendation ; and (3) that such names as *smithi* and *smithii* within a single nominal genus are to be deemed homonymous.

6. **Mr. Cyril F. dos Passos** (*American Museum of Natural History, New York* ; *SSZ committee*) :

I agree with Mr. Hemming's factual analysis of the problem as set forth in his letter to you of 17th September.

My feeling is that it would be well in these cases to retain all original spellings whether ending in " -ii " or " -i " without emendation, and adopt a recommendation that authors use the "-i" ending, but when they fail to do so in the future that the original spelling be deemed valid and not subject to emendation.

Also, the rules should provide that the second similar name (modern Patronymic) in a genus whether ending " -ii " or " -i " or vice versa shall be considered a junior homonym.

In so far as necessary appropriate amendments and recommendations should be adopted at the 1958 London Congress.

7. **Dr. Ellsworth C. Dougherty** (*University of California, Berkeley* ; *SSZ committee*) :

My own understanding of the matter is that the terminations " *-i* " versus " *-ii* " are simple orthographic variants without significance under the rules and should not even arise as questions under the conception of Valid Original Spelling. In this sense, both are " valid original spellings ".

However, if there is to be any question about it, then let us have the matter fairly resolved by the Commission.

8. Dr. E. Raymond Hall (*University of Kansas, Lawrence* ; *SSZ committee*) :

This will acknowledge your letter of 28th September 1956, requesting my views on the " *-i* " versus " *-ii* " termination of the names of species and subspecies. Yes, I agree with the factual analysis set forth in Mr. Hemming's letter to you dated the 17th September 1956.

My view is that the " *-i* " and " *-ii* " terminations are permissible variants at the time of the original publication of the name, but that once such a name has been published the original spelling, whichever it may have been, is the valid original spelling, and is not subject to change.

9. Dr. Carl L. Hubbs (*University of California, La Jolla* ; *SSZ committee*) :

I have taken the view that the current status, following the Copenhagen Decisions, is that " *-i* " and " *-ii* " are permissible variants, with " *-i* " recommended as a preference. I have therefore been using " *-i* " and have recommended that others do so.

Certainly there can be no reasonable doubt that specific names otherwise identical and differing only in the single or double " *-i* " should be regarded as homonyms. Article 35 should include a definite statement to this effect.

Your quoted longhand notes made at the Copenhagen Colloquium on 4th August 1953, carry the statement that " Mr. Hemming suggests reinstating fifth paragraph of Article 14 as a mandatory provision and then adopting Prof. Bradley's proposal. Approved." This action on the fifth paragraph of Article 14 either escaped my comprehension at the time or has since escaped my memory. It would seem that the fifth paragraph of Article 14, if made mandatory, would directly conflict with the ruling of " *-i* " and " *-ii* " as permissible variants. I note that the published *Decisions* made no reference to the fifth paragraph of Article 14.

Quite a few of us have thought that the permissible variant ruling was one of the several unwise decisions reached at Copenhagen. Though I think that vacillation in such matters is giving Zoological Nomenclature a couple of black eyes, I am inclined to favor Mr. Hemming's proposal to reconsider the matter in 1958.

I fully agree with Mr. Hemming's factual analysis as outlined in his letter to you dated 17th September. In reference to the three problems raised by Mr. Hemming :

(1) I have already discussed the obvious homonymy of names identical except for the " *-i* " or " *-ii* " ending.

(2) I cannot quite conclude that the Copenhagen Decisions did not at all deal with the problem of the status of a name ending in " *-i* "

if altered from the same name ending by original designation in "*-ii*" [or vice versa]. The status is clearly stated to be the same, as the two names "are permissible variants, the differences between them having no nomenclatorial significance". Therefore, neither is, by this Decision (91), an Invalid Emendation. Mr. Hemming states that he also believes it was not the intention of the Copenhagen Congress to make the "*-ii*" name an Invalid Emendation.

(3) Mr. Hemming agrees that at the time of the last Congress he would have felt it permissible to alter "*-ii*" spellings to "*-i*", but he states that now he considers "that the words actually employed in the Copenhagen Decision are such that the single and double "i" terminations are to be regarded as permissible variants at the time of the original publications of the name, but that once such a name has been published the original spelling, whichever it may be, is the Valid Original Spelling, and is not subject to change". Although this last is the interpretation I have consistently favored, I cannot squeeze that interpretation out of the wording of the Decision, as I recall the wording given in 1953 or as I read the published report. Certainly at Copenhagen there was no indication that the permissible variation applied only to original descriptions.

Since the whole matter seems rather unsettled (and perhaps debatable, in respect to the Copenhagen Decisions), I would favor a reconsideration of the matter in London. If the matter were to come to a vote now, I would favor following the original spelling, as the one way to avoid almost endless exceptional situations. Thus we would avoid worries over such cases as:

Original spelling	**Possible required or permitted emendations**
smithii	*smithi*
tanakae (♂)	*tanakai*
mariae (♀)	*mariaae*
gloriae (♀)	*gloriaae* (see Paris Enactments)
smithianus (♂)	*smithi*
fabricii (♂) (For Mr. Fabricius perhaps known to some as Mr. Smith)	*fabriciusi*
scrippsi (♀) but based on family name which is masculine	*scrippsae*

Etc., etc.—I'd like to see an inclusive set of clearly stated recommendations, but definite adherence to Valid Original Spellings (obvious or demonstrated misprints alone excepted).

10. Dr. Myra Keen (*Stanford University, California* ; *SSZ committee*) :

I agree with the factual analysis in Mr. Hemming's letter.

When the Copenhagen Decisions were first published I read them to mean that automatic emendation by subsequent authors was not only permissive but desirable. Later re-reading of the precise wording, however, has led me to have misgivings. Hence, I feel that clarification to this end is in order and should be sought. We have a fine illustration of the desirability of automatic emendation in the field of West Coast Mollusca : Conrad in 1837, in the first paper to describe a considerable number of California seashells named several—seven, as I remember it—species for Thomas Nuttall, the collector. For about one-half the "*-ii*" termination was used, for the rest "*-i*". So, as an added burden to memory one must remember to write *Saxidomus nuttalli* but *Cardium nuttallii*. I therefore welcomed the supposedly permissive emendation to a uniform *nuttalli* wholeheartedly, and I support the move to have this clearly stated in the new Code.

11. Dr. Ernst Mayr (*Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts* ; *SSZ committee*) :

I would not speak the truth if I would say that I am particularly exercised about the problem of the ending "-ii" versus "-i". There is a good deal of legalistic logic in Hemmings statement, yet I think it is basically unrealistic. Bradley's proposal at Copenhagen stemmed from a widespread sentiment to get away from pedantry and ritualism in such matters. I know that many contemporary authors shorten any "-ii" ending consistently into a "-i" and it places an intolerable burden on an editor if he is to check back into the original literature to restore what is legally correct. The only thing that is consistent in the matter of these two alternate endings is the inconsistency of modern authors. I know that to make a rigid ruling on these endings would be unenforcable and I am opposed to any prohibition that cannot be enforced. It only weakens the authority of the remainder of the law. For these reasons, in spite of the legitimate views expressed of Hemming, I am strongly in favor of accepting the two alternate endings as of equal status and as strictly exchangeable. Any other decision, I am afraid, would lead us into endless searching of the literature and loss of time. I presume that every conscientious author of checklist, monographs, and catalogs, who does go back to the original citations makes an effort to record the correct endings, but I doubt that this can be enforced in the literature in which scientific names are a side issue.

12. Mr. Curtis W. Sabrosky (*Entomology Research Division, U.S. Dept. Agriculture, Washington, D.C.* ; *SSZ committee*) :

I agree with Hemming's factual analysis (his points a to d). I may note that Professor Bradley's expression "permissible variant" concisely expressed the sense of *Opinion* 8.

Comments on Hemming's problems:

(1) I believe that *smithi* and *smithii* in the same genus would be homonyms, as I believe Bradley intended. I agree with Hemming that that should be made explicit. Things left implicit have an annoying way of implying different things to different people.

(2) and (3) It is my feeling that Copenhagen meant " permissible variant " to apply only to the original proposal, and that once proposed, the original spelling is to be preserved. This is the sense of *Opinion* 8. Incidentally, the discussion of the original *Opinion* is nicely reasoned, though brief.

In view of possible confusion as to the extent to which the expression " permissible variant " was intended to apply, I should not be averse to reopening the question at London, and hearing other views. At present, I would vote to retain the provision as is, with the meaning made explicit as noted by Hemming, and with an even stronger recommendation in favour of the single " i " for original proposals. If we start to permit emendations, we shall invite the same difficulties envisaged in the discussion in *Opinion* 8.

Thus, a majority of those voting, of the members of each committee favours retention of the original orthography for names of this kind heretofore published. There has been no dissent from the proposition that patronyms referred to the same nominal genus, and differing from each other only in the terminations " *-i* " and " *-ii* ", should be regarded as homonymous.

DOCUMENT 1/52

(*continued from page* 620)

Comment on the " Parataxa Plan "

(Reference : Professor Moore's Digest reproduced as Document 1/15)

By **H. B. WHITTINGTON**

(*Museum of Comparative Zoology at Harvard College, Cambridge, Mass., U.S.A.*)

(Letter dated 17th January 1958)

In response to your appeal for advice regarding proposed provisions for " parataxa ", I write as follows :

All fossils are discrete parts of once-whole animals and could be deemed unidentifiable ; therefore, it is best to leave problems such as those raised by *Trigonellites* and *Scottognathus* in the hands of the specialists directly concerned and to let them appeal to the Commission if they feel moved to do so. The adoption of the present proposals would mean that all such problems must be brought to the attention of the Commission and place an intolerable and discouraging burden upon the Commission and Paleontologists alike, without in any way adding to the knowledge of the particular fossils.

I am not in favor of the adoption of these proposals.

DOCUMENT 1/53

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "

(Commission Reference : Z.N.(S.) 1056)

Letter dated 24th January 1958 from **R. V. MELVILLE** (*Geological Survey and Museum, London*), covering a Report of a joint meeting of the Palaeontographical Society and of the Palaeontological Association held in London on 22nd January 1958.

I enclose the report of the joint meeting of the Palaeontographical Society and the Palaeontological Association held yesterday to discuss the Moore/Sylvester-Bradley " Parataxa Plan ".

I do not think I am going beyond my terms of reference when I add that we have tried to keep the report brief, since it seems unnecessary to burden you with details of the discussion that preceded the putting of the resolutions to the vote. We have taken for granted that if the Moore/Sylvester-Bradley proposals are accepted, this will involve acceptance not only of the safeguards written into the proposals, but also the unwritten, but generally understood safeguard, that the Commission would not sanction the classification of any group in terms of Parataxa unless it had first satisfied itself that such a step had the support of a responsible and substantial body of specialist opinion in the group concerned.

ANNEXE TO DOCUMENT 1/53

Report of a Joint Meeting of the Palaeontographical Society and of the Palaeontological Association held in London on 22nd January 1958

By **R. V. MELVILLE**

(*Secretary, Palaeontographical Society, London*)

and

GWYN THOMAS

(*Secretary, Palaeontological Association, London*)

A joint meeting of the Palaeontographical Society and the Palaeontological Association to discuss the Moore/Sylvester-Bradley " Parataxa Plan " was held at the Geological Survey and Museum, London, on 22nd January 1958 (by kind permission of the Director, Sir W. J. Pugh). As Secretaries of the two societies, both present at the meeting, we submit the following report on the resolutions adopted. Forty-six members attended, of whom forty were present when the votes were taken, and written contributions were received from four members unable to be present. Dr. R. C. S. Hudson, President of the Palaeontological Association, was in the chair.

Resolution 1

This meeting resolves to request the International Congress of Zoology to provide some means whereby the nomenclature of discrete-part fossils in certain fields of palaeontology can be made internationally stable and uniform.

Voting:	For	37
	Against	3

Resolution 2

This regulation of the nomenclature of discrete parts should apply only to groups where a dual nomenclature exists and is currently found to be a practical necessity (for example, Conodonts).

Voting:	For	34
	Against	3

Resolution 3

In the opinion of this Meeting, the Moore/Sylvester-Bradley proposals provide a suitable means of achieving the objects set out above.

Voting:	For	17
	Against	14
	Abstained	9

Resolution 4

This meeting requests that, in the event of the Moore/Sylvester-Bradley proposals being accepted, the names of parataxa be distinguished from those of taxa by a prefix or by some other means.

Voting:	For	32
	Against	6

DOCUMENT 1/54

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "

(Commission Reference : Z.N.(S.) 1056)

By **ALBERTO M. SIMONETTA**

(Istituto di Zoologia dell " Universita ", Firenze, Italy)

(Letter dated 27th January 1958)

In connection with the proposal by Professor Moore and Mr. Sylvester-Bradley of the recognition of " Parataxa ", I wish to express my support to the advice of Prof. Pokorny (Document 1/39).

It seems to me, anyway, that some additional measures should be taken in order to enable the " parataxa " to fulfil their object, to provide some opportunity for disposal of the burden of names based on inadequate material, and finally to discourage authors from bestowing new names for the sake of name giving.

In order to obtain such results I should advise that provisions should be included in the Rules to the effect :

(1) that Parataxa should be recognised by the Commission only (a) in the case of discrete parts of animals, (b) in the case of isolated life stages of animals subject to some sort of metamorphosis. Groups of life stages and assemblages of any sort should never be dealt with in terms of parataxa

(2) that relief from priority in the case of names either established conditionally (Article 6, Section 5(c)) or based on parts of an animal or on the work of animals (Article 6, Section 5(e) ; Article 8, Section 2(b)) should not require the exercise of the Commission's Plenary Powers, but shall need the support of the simple majority of the voting Commissioners.

An alternative to the second of the above stated proposals might be: that whenever the type specimen of a taxon of the species group is found to be such as to prevent further specific identification by reference to it (and especially when it consists of an isolated fragment of an individual or of the work of an animal), but is not such as to prevent supraspecific identification, the Commission, upon application by any interested zoologist, may rule that the specific name concerned may be dealt with by any reviser wishing to consider the type specimen concerned as conspecific with some other taxon based on more adequate material, as a junior subjective synonym of such better known taxon. This rule, however, should not extend to taxa of the generic or suprageneric groups.

I am not going to state in detail the emendations and the additions to the Rules which should be necessary in order to make the above stated principles operating, as I feel that, should these ideas meet with the approval of the interested zoologists, this should be done by someone with a better knowledge of English than myself.

DOCUMENT 10/3

(*continued from page* 215)

Support for the Settlement of 7th November 1953 regarding the texts of the "Règles" to be accepted as the sole substantive texts and opposition to any attempt to re-open that Settlement

Resolution adopted by "Société Zoologique de France"
at a General Assembly held on 14th January 1958

(Commission Reference : Z.N.(S.) 1259)

(Letter dated 28th January 1958 from Professor L. Gallien, Secrétaire Général de la Société Zoologique de France)

J'ai l'honneur de porter à votre connaissance que les Membres de la Société Zoologique de France réunis, le mardi 14 Janvier 1958, en Assemblée Générale, ont déclaré à l'unanimité :

1°) accepter les décisions de la Commission de Nomenclature (Copenhague, 1953 : 126–131)[1] selon lesquelles les Règles de la Nomenclature Zoologique seront imprimées en anglais et en français, les deux textes faisant foi, et que, en cas de différend dans l'interprétation de ces règles, la Commission internationale de Nomenclature statuerait en dernier ressort.

2°) s'opposer à toute tentative de modification de ces décisions, qui aurait pour conséquence de rendre le seul texte anglais authentique.

---

[1] The Decision here referred to is that taken by Professor R. Spärck in his Minute dated 7th November 1953 published in December 1953 (*Copenhagen Decisions zool. Nomencl.* : 126–131).

DOCUMENT 17/3

(*continued from page* 324)

Citation of dates in round brackets for bibliographical references

(Commission Reference : Z.N.(S.) 1294)

By **ALEX TOWNSEND**

(*Librarian, British Museum* (*Natural History*), *London*)

(Letter dated 24th January 1958)

In the compilation of the Library Catalogue of this Museum we have found that the use of round brackets is most convenient for enclosing any information—dates, names, additional titles, or titles of appendices, etc.—which does not appear on the title-page of the book in question.

2 For instance, if Part 2 of a series comes out a year or more before Part 1, the final catalogue entry will read something like (1839-)1840-42. This indicates that Part 1 came out in 1840, but that a subsequently numbered part di[illegible]n fact, appear before Part 1 in 1839. Again, a date in round brackets, e[illegible](1860), indicates that this date does not appear on the title-page or in the colophon to a book, but that it is to be found somewhere else in the book—perhaps in a note on the last page stating that the volume was printed in 1860, and that there is otherwise no reasonable doubt at all that this is, in fact, the date of publication. Purely conjectural dates, supplied through the detective work of the bibliographer are, of course, enclosed in square brackets.

3. The round bracket will be rarely used, but seems to me to be a symbol of desirable subtlety when employed correctly.

PUR[illegible]
24 APR [illegible]

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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of
THE INTERNATIONAL COMMISSION ON
ZOOLOGICAL NOMENCLATURE

Edited by
FRANCIS HEMMING, C.M.G., C.B.E.
Secretary to the International Commission on Zoological Nomenclature

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* Professor Esaki died on 14th December 1957, while the present Part was passing through the Press.

BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 15, Part 22 (pp. 693—740) *25th April* 1958

CASE No. 33

DRAFT " RÈGLES " : MISCELLANEOUS DRAFTING AND OTHER AMENDMENTS

TISH M
L HISTC

(Commission Reference : Z.N.(S.) 1329)

[**Editorial Note :** It is proposed to group under the above Case Number all papers received containing details of miscellaneous drafting and other amendments, irrespective to the Articles of the *Règles* to which they apply. For the purposes of convenience each such suggestion is being allotted a Point number in a consecutive series in each paper. Further, the amendments suggested will be listed under the appropriate Article in the Summary of the Agenda Paper which it is proposed to compile on the eve of the Colloquium. Intl'd F.H. 7th March 1958]

PURCHASED

DOCUMENT 33/1

Four minor drafting amendments

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Enclosure to a letter dated 16th January 1958)

The following are minor corrections, but more than mere errata, that escaped attention in preparing the copy of the revised text of the *Règles*. Since some modify the meaning of the rule involved, they will require the attention of the Colloquium.

Point (1) (Article 5)

P. 45, line 29, after " nullify it " insert " for the purpose of priority but not of homonymy ".

Point (2) (Article 7)

P. 64, line 16, I propose to add " This shall include offset printing, but not reproduction by mimeograph, hectograph, or similar processes ". It should be noted that these processes frequently blur or render illegible some letters or parts of pages and are not really suited to large-scale reproduction.

Point (3) (Article 22)

P. 159, following line 25, the following should be inserted : " (a) Species or higher taxa. Change of rank between species and subspecies, genus and subgenus, or taxa of the Family-Group or higher does not affect the authorship ". Paragraphs (a) and (b) should then be re-lettered " (b) " and " (c) ".

Point (4) (Article 24)

P. 183, after line 8, add " (ii) ". If two specific names within a single genus are variant spellings of the same geographical name, the case shall be brought to the attention of the Commission for the purpose of deciding whether they shall be deemed homonyms.

Example : *brasiliensis* and *braziliensis.*

(If this change is made paragraph (ii) will become (iii).)

CASE No. 34

DRAFT " RÈGLES ", ARTICLE 22 : AUTHORSHIP OF NAMES

(Commission Reference : Z.N.(S.) 1326)

(For the relevant provision in the Draft *Règles* see 1957, *Bull. zool. Nomencl.* **14** : 156–157)

DOCUMENT 34/1

Proposal for the amendment of Article 21 of the " Règles " (i.e. Draft Article 22) so as to make its operation entirely objective in cases where a person other than the nominal author of the book or paper concerned is responsible for a name and its indication, definition or description

By

CYRIL F. DOS PASSOS

(*The American Museum of Natural History, New York and the Carnegie Museum, Pittsburgh*),

and

ALEXANDER B. KLOTS

(*The College of the City of New York, and The American Museum of Natural History, New York*)

Introduction

Prior to the Thirteenth International Congress of Zoology held at Paris in 1948, Article 21 of the *Règles* read as follows :

> Article 21.—The author of a scientific name is that person who first publishes the name in connection with an indication, a definition, or a description, unless it is clear from the contents of the publication that some other person is responsible for said name and its indication, definition, or description.

This rule does not appear to have been construed by the Commission or passed upon in any *Opinion* or *Declaration*.

Bull. zool. Nomencl. Vol. **15**, Part 22. April 1958.

2. At the Thirteenth International Congress of Zoology this rule was revised and amplified. Although the *Règles* as amended at Paris have never been published, we can obtain the substance of the amendment of Article 21 by referring to volume 4 of the *Bulletin of Zoological Nomenclature*. There, on pages 565 and 566 we find the following :

> " THE COMMISSION agreed :—
>
> (1) to recommend that the following provisions should be added to Article 21 prescribing the method to be followed (i) in determining the authorship to be attributed to a name published in a book or paper written jointly by two or more authors and to a name published by one author in a book or paper written by another author, and (ii) in citing names so published :—
>
> (a) Where in a book or paper written jointly by two or more authors, it is clearly stated that one of those authors is exclusively responsible for the description of one or more specified taxonomic units there named, the names or names so published are to be attributed solely to the author stated to be responsible for the descriptions thereof and not jointly to both or all of the joint authors of the book or paper. The name of a taxonomic unit so described and named by an author " B " in a paper written jointly by himself and one or more other authors (say, a paper written jointly by authors " A " and " B ") is to be cited as having been published by " ' B ' *in* ' A ' and ' B ' "
>
> (b) Where in a book or paper written by one author (say author " A ") it is clearly stated that the description of one or more specified taxonomic units there named has been prepared exclusively by some other author (say, author " C "), the name or names in question are to be attributed to author " C ", not to author " A ". The name of a taxonomic unit so described and named is to be cited by later authors as having been published by " ' C ' *in* ' A ' ".
>
> (2) to invite the Acting President, in his capacity as Secretary to the Commission, to report forthwith to the Section on Nomenclature the recommendation recorded in (1) above.
>
> (The Acting President thereupon submitted the foregoing recommendations to the Section on Nomenclature.) ".

The record of the approval of the above recommendation by the Section on Nomenclature will be found on page 119 of Volume 5 of the *Bulletin of Zoological Nomenclature*.

3. At the Fourteenth International Congress of Zoology held at Copenhagen in 1953, Article 21 of the *Règles* was amended again. It is once more impossible to quote the exact language of the amendment, because it has not been published either in draft or final form. However, by referring to the Copenhagen Decisions (1953), edited by Francis Hemming, we find the following (pp. 58–59) :

> Article 21
>
> 103. Clarification of the rules relating to the authorship to be attributed to scientific names 30 : The Colloquium considers that it is desirable that a clarification should be given of the relationship between two decisions taken in Paris in 1948 in regard to the authorship to be attributed to a name published by an author other than that by whom the name was first proposed. Under the first of these decisions, which is recorded on pages 259–260 of volume 4 of the *Bulletin of Zoological Nomenclature*, a name which has been published as a *nomen nudum* or has gained currency through being used as a manuscript is to be attributed to the author by which it was first validly published with an indication ; under the second

of these decisions, which is recorded on pages 565–566 of the same volume of the *Bulletin*, a name published in a book or paper by one author of the book or paper concerned makes it clear that the other author was responsible both for the new name and for the "indication" or description upon which the availability of that name rests. In addition to the need for clarifying the relationship between the foregoing decisions, it is desirable also—in the interests of clarity—that a small drafting amendment should be made in the second of these decisions. The Colloquium accordingly recommends :—

(1) that words should be inserted in Article 21 to make it clear that the rule relating to the authorship to be attributed to a name published by an author other than that by whom it was originally proposed set out on pages 565–566 (Conclusion 49 of the Fourteenth Meeting held by the International Commission during its Paris Session in 1948) of volume 4 of the *Bulletin of Zoological Nomenclature* takes precedence over the associated rule relating to the authorship to be attributed to *nomina nuda* and manuscript names when later validly published with an indication set out on pages 259–260 (Conclusion 28 of the Ninth Meeting of the Commission during its Paris Session) of the same volume ;

(2) that the rule set out on pages 565–566 of vol. 4 of the *Bulletin* should be qualified in such a way as to make it clear that it applies only where the book or paper concerned contains a clear indication not only that the name in question was proposed by some author other than that by whom the book or paper concerned was written but also that the indication, definition or description on which, under Article 25, the availability of that name depends was written not by the author of the book or paper concerned but by the author to whom the name is there attributed ".

The objection to the proposed wording of Article 21

4. This paper is concerned solely with that part of Article 21 subdivision (2) above, which relates to a name proposed by an author other than the one by whom a book or paper was written, when the indication, definition or description on which, under Article 25, the availability of that name depends was written not by the author of the book or paper concerned but by another to whom the name is sought to be attributed. It will facilitate the study of this problem to analyze closely the wording of (2) above by breaking it up into its component parts. We then see that the rule set out on pages 565–566 of Volume 4 of the *Bulletin* should be (italics ours) :

qualified in such a way as *to make it clear* that it applies only where the book or paper concerned contains *a clear indication* not only that

(a) the name in question *was proposed* by some author other than that by whom the book or paper concerned was written *but also* that

(b) the indication, definition or description on which that name depends *was written*

  (1) not by the author of the book or paper concerned *but*

  (2) by the author to whom the name is there attributed.

5. As the *Règles* are now worded—insofar as we can tell without its actual text—the question is still a subjective one, as to which zoologists may reasonably differ. The use of the expressions " to make it clear ", and " a clear indication ", both highly subjective expressions, render the proposed Article difficult of application because what is clear to one person may not be at all clear to another, as we shall see from an examination of the following cases which illustrate this point :—

(1) Is the generic name " Copaeodes " to be ascribed to Edwards or Speyer ?

This name has been ascribed usually to Edwards, 1877, but Evans (1955, p. 307) credits it to Speyer. The name appeared first in the " Appendix " to a paper by Edwards entitled " Catalogue of the diurnal Lepidoptera of America north of Mexico " (1877, p. 64). It is there stated by Edwards (p. 63) " I give the *definitions* of Sections and Genera of the Hesperidae as sent by Dr. Speyer, with his notes ", [italics ours]. On the following page appears " COPAEODES, Speyer ", with a definition or description. The question is, " Who is responsible for the name *Copaeodes* ? " It is nowhere definitely stated that this name was proposed or suggested by Speyer. If Article 21 contained language that both the name and indication, etc., must be " expressly stated " by the author of the paper to have been proposed by a third party, it would be obvious in this instance that the name could not be ascribed to Speyer. In this case there may be honest differences of opinion on this subject, as evidenced by the fact that Edwards, until Evans' publication, had been treated by all American writers as the author of *Copaeodes.*

(2) Is the specific name " eurydice " to be ascribed to Boisduval or Brisout and Bellier ?

Colias eurydice has been ascribed usually to Boisduval with the date 28 March 1855. But the author's attention has been called recently by Mr. Paddy McHenry of Burbank, California, to the fact that this name with a description was published in the minutes of a meeting of the Société Entomologique de France, which are signed by Brisout de Barneville and Bellier de la Chavignerie as secretaries, although in the index this note is ascribed to Boisduval. The relevant portion of the minutes (omitting references to other specific names which are similarly involved) is as follows :

> M. le docteur Boisduval donne communication d'une lettre de M. Lorquin, qui contient quelques détails sur les insectes qu'il a recueillis en Californie.
>
> . . . Le même membre fait aussi passer sous les yeux de la Société quelques Lépidoptères des montagnes de la Californie, qu'il a également reçus de M. Lorquin, et qu'il regarde comme mouveaux pour la science ; et il dit qu'il se propose de décrire plus tard ces espèces avec quelques autres que lui promet encore M. Lorquin, et de les publier dans nos Annales, ainsi qu'il a déjà fait pour celles qu'il a reçues précédemment.
>
> Tels sont entre autres . . . la *Colias eurydice,* la plus belle des Coliades connues ; elle a le port et la taille de la *Caesonia,* et à peu près avec le même dessin, mais chez cette brillante espèce le jaune est remplacé par un orangé vif, et les ailes supérieures ont un reflet violet changeant comme dans nos *Mars* ; . . . Commissaires-rapporteurs ; MM. L. Brisout de Barneville et Bellier de la Chavignerie.

Here is a case where it does not appear expressly that Boisduval was responsible for the names or their definitions or descriptions. It is possible that Lorquin may have been responsible for both. According to the minutes of the meeting, Boisduval merely showed the specimens to those present and said that he intended to describe them, which he did not do until seven years later in 1862. At that time it is true he referred to the meeting of 1855, with a slight typographical error as to the page number, indicating perhaps thereby that he believed he had published the names at that time.

On the previous page of the Bulletin, which is part of the minutes of the same meeting, we have a case where it is perfectly clear that a party other than the secretaries of the meeting is responsible for a new name and its definition or description. There (p. 30) the following appears :

> M. L. Fairmaire fait passer sous les yeux des membres de la Société quelques individus de l'*Anisotoma picea*, trouvés par M. Caulle dans les sables de Cayeux . . . En même temps il montre quatre individus d'une espèce nouvelle du même genre, récemment découverte aux environs du Paris, et dont voici la diagnose :
> " *Anisotoma ornata* . . . "

Then follows a Latin description, and also in smaller type a history of the discovery, collector, etc., and a comparison with another species.

Conclusion and Recommendation

6. These two cases show that subdivision (2) of Article 21, as it appears to read at present, is too subjective to be of much help to a taxonomist. Both of these cases could be decided in favour of Edwards or Speyer as to the first, and Brisout and Bellier or Boisduval as to the second, but that would not be the result if the Article were made entirely objective by adding the words " expressly stated ". However, in that event *Copaeodes* and *Colias eurydice* would probably be credited to individuals who might not in fact have been their actual authors. If the London Congress wishes to attain the opposite result, Article 21 should state in words or substance " unless it appears by reasonable inference from all the facts and circumstances that the names and/or indications, etc., were proposed by a third party ". Then *Copaeodes* would be ascribed to Speyer and *Colias eurydice* to Boisduval, a fair result.

7. Nevertheless, in order to make (2) of Article 21 entirely objective, it is proposed that in the alternative subdivision (2) be amended so as to read as follows :—

> The author of a scientific name is that person who first publishes the name in connection with an indication, a definition, or a description, unless it is stated expressly in the same publication that some other person is responsible for said name and its indication, definition, or description. If one person is responsible for the name and another for the indication, definition, or description, that shall constitute joint authorship.

8. If such phraseology were adopted, there could be no possible doubt about the proper solution of the two cases heretofore discussed. *Copaeodes* would be attributed to Edwards, because it is nowhere expressly stated that Speyer was responsible for that name and *Colias eurydice* (as well as the other names proposed in the minutes of the meeting) would be ascribed to Brisout and Bellier, because it is nowhere stated expressly in the minutes that Boisduval was responsible for that name and its definition or description. Perhaps—nay probably—an injustice would be done to Speyer and Boisduval, but the problems would be decided beyond dispute. Also, the situation not now provided for in the *Règles* where one person is responsible for the name and another for the indication, definition, or description would be covered. Such cases undoubtedly exist, although none comes to mind at the moment.

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Brisout de Barneville, Louis & Jean Baptiste Eugène Bellier de la Chavignerie
1855. Seance du 28 Mars 1855. *Bull. Soc. Ent. France*, **3** (3rd ser.) **:** xxv–xxxii

Edwards, William Henry
1877. " Catalogue of the diurnal Lepidoptera of America north of Mexico ". *Trans. Amer. Ent. Soc.* **6 :** 1–68

Evans, William Harry
1955–[1956]. *A Catalogue of the American Hesperiidae indicating the classification and nomenclature adopted in the British Museum (Natural History).* London, British Museum, pt. 4 (1955), vi + 500 pp., pls. 54–88 + [3] pp. ; addenda and corrigenda [1956], 4 pp.

Hemming, Francis (ed.)
1953. *Copenhagen decisions on zoological nomenclature. Additions to, and modifications of, the " Règles Internationales de la Nomenclature Zoologique ". Approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, August,* 1953. London, International Trust for Zoological Nomenclature, xxx + 136 pp., 2 pls.

Postscript

9. Shortly after the preparation of the foregoing paper the authors received (28 December 1957) Part 1 of the draft of the revised English text of the *Règles*, which as published, is dated 29th November 1957 (*Bull. zool. Nomencl.* Vol. 14, Pts. 1–6, pp. 1–190).

10. While the old Article 21 consisted of a single paragraph, the new Article 22 consists of five main headings, as follows (: 156) : " A. DETERMINATION OF AUTHORSHIP ", " B. CITATION OF THE NAME OF THE AUTHOR ", " C. CITATION OF DATE ", " D. CITATION OF OTHER DATA ", and " E. BIBLIOGRAPHIC REFERENCES ". We are concerned only with the first of these headings which is divided into three sections entitled : " Section 1. General Rules ", " Section 2. New combinations ", and " Section 3. Change of rank ", and with only Section 1 thereof. This section is further subdivided into eight subdivisions entitled: "(a) One among joint authors.", "(b) Publication in minutes of meetings", "(c) Contributors", "(d) 'Nomina nuda' or manuscript names when established", "(e) Rejected names when later established", "(f) Names published conditionally", "(g) Valid emendations", and "(h) Invalid emendations". The only seemingly relevant provisions of these eight subdivisions to this paper are (a), (b), and (c), which are now quoted in full with their annotations and citations:

A. DETERMINATION OF AUTHORSHIP

Section 1. General rules.

(a) One among joint authors.—If a name was established in a work written jointly by two or more authors and it is clearly stated that one of those authors is exclusively responsible for the description or indication that made that name available, it shall be attributed solely to that author, not to the joint authors of the work.

B. 4 : 565, par. 49 (1a)

(For citation see Section 5, b, i).

(b) Publication in minutes of meetings.—If the name of a taxon is established by publication in the minutes of a meeting, its author shall be the person responsible for it, not the secretary of the meeting or other reporter (*cf.* 7/3).

Declaration 32. *Opinions and Declarations*

"Recommendation" 1. Unpublished data not to appear in minutes.—Editors and reporters of meetings should not include in their published reports new names of taxa or particulars of acts affecting the nomenclatural status of names.

Declaration 32. *Opinions and Declarations*

(c) Contributors.—If it is clearly indicated that the description, definition, or indication that serves to validate (*cf.* Art. 6) the name of a new taxon was prepared by some one other than the author of the work, that name shall be attributed to the author who contributed it, not to the author of the work.

B. 4 : 565, par. 49 (1b)

(For citation, see Section 5, b).
Paragraphs (a) and (c) shall take precedence over paragraph (d) following.

C. p. 59, par. 103 (1)

11. The language of Section 1 subdivision (b) purports to incorporate the substance of *Declaration* 32* into the rules but does not solve the problems discussed in this paper, because it is still necessary to determine who is responsible for the name published in the minutes, and that fact is clearly governed by subdivision (c) where is found again the subjective language "clearly indicated".

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* This Declaration (1957, *Opinions and Declarations*, vol. 16, p. xiii), insofar as material, reads as follows: "DECLARATION:—(1) Where (a) in connection with the presentation of an unpublished paper before a meeting of a learned society or with the exhibition of a specimen before such a meeting, a name is published with an "indication" in an abstract prepared for use at, or in a report of the proceedings of, such a meeting, and thus acquires the status of availability in zoological nomenclature, the name so published is to be attributed to the author of the unpublished paper or, as the case may be, to the zoologist by whom was proposed the name attached to the specimen exhibited and not to the author of the abstract or report".

12. It will be notice from a perusal of the draft of Article 22 (existing Article 21) that it bears very slight resemblance to the actions hereintofore quoted as having been taken at Paris (1948) or Copenhagen (1953). In the first place little importance seems to be attached any longer to the person responsible for the name. Sole emphasis is given now to the indication, definition or description, which are cut down in one place to " . . . the description or indication . . . " Secondly, *Declaration* 32 is introduced into the picture, but fails to provide what the result is if no one appears to be responsible for a name in the minutes of a meeting, except that it shall not be attributed to the secretary of the meeting. Is such a name then a *nomen nudum* or an anonymous name ? If the former result is to follow, in one case cited neither Boisduval nor the secretaries of the meeting may be responsible for the names published in 1855. It is not believed that the name *Colias eurydice* can be a *nomen nudum* because it was published with an indication, definition or description (see new Article 7, Section 3). If the secretaries of the meeting should not be credited with it, it must be anonymous with possibly Boisduval's name in brackets. But the date would remain 1855 and not become 1862.

13. It seems to the authors of this paper that before the problems herein discussed can be settled satisfactorily, a decision must be made whether they are to be solved objectively or subjectively. Once that decision has been made, suitable language to express that solution can certainly be found.

CASE No. 35

DRAFT " RÈGLES " (GENERAL EDITORIAL QUESTIONS) : QUESTION OF THE USE OF INITIAL CAPITAL LETTERS FOR THE NAMES OF CATEGORIES IN THE ANIMAL KINGDOM AND OF THE USE OF HYPHENS WHERE SUCH NAMES CONSIST OF COMPOUND WORDS

(Commission Reference : Z.N.(S.) 1306)

DOCUMENT 35/1

The hyphenation and capitalization of the categories of classification

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Statement received on 20th January 1958)

In the draft of the revised English text of the *Règles*, editorial policy has not followed what I believe to be the best modern usage in hyphenation and capitalization of such terms of classification as suborder, phylum, etc. In these matters, zoological usage need not deviate from the ordinary usage of the English language, and there is therefore no need for special rules within the Code dealing with them. But the text, when published, will afford examples to which zoologists will look and therefore the Colloquium should give the matter thought and reach a decision as to what forms shall be adopted when the code is finally printed.

2. " A hyphen is a symbol conveying that two words are made into one " (Fowler. A dictionary of modern English usage). A prefix is " a significent syllable or particle used as the first element of a word. (Standard dictionary).

An inseparable prefix is a mere part, that was not a separate word in its original language (Standard dictionary). There is no warrant in English grammar for separating an inseparable prefix by a hyphen from the balance of the word of which it forms a part ; a hyphen so used would interrupt the unity and continuity of the word, and would not convey the meaning that a hyphen implies, nor any other meaning. " Infra- ", " sub- ", and " super- ", although prepositions or adverbs in Latin are only inseparable prefixes in English. Words initiated by them are not divided by a hyphen in the Oxford, Standard, Fowler's, or Webster's dictionaries. It follows that infrasubspecific, not infra-subspecific is a correctly written, though awkward, adjective. Subspecies, subgenus, suborder, subclass, superfamily appear in one or more of the dictionaries mentioned, but in some cases the dividing of all syllables by hyphens makes it difficult to tell whether a hyphen is intended unless the word appears in the text, in which case such words are invariably without hyphens. Such English zoologists as Huxley and Lankester hyphened and capitalized at least the higher categories. Schenk and McMasters (Procedures in Taxonomy, last paragraph on p. 4) as well as the dictionaries cited, use neither hyphens nor capitals in any category.

3. The Oxford, Standard, and Webster's dictionaries, like Schenk and McMasters, do not capitalize the names of any category (of course they capitalize the names of the taxa). The categories are not capitalized whether employed generically, as genus, family, class, phylum, or specifically as genus Homo, family HOMINIDAE, class Mammalia, or phylum Vertebrata. I can see no logical reason for using small initial letters and no hyphens up to a certain point in the ascending scale of classification, and above that point both hyphens and capitals. It seems a feeble method of implying a certain grandeur to the higher categories that is denied the lesser, on the same principle that we capitalize the word God when referring to the deity but not in reference to the heathen gods.

4. I accordingly propose that in the forthcoming official English text of the Code, we employ kingdom, subkingdom, phylum, subphylum, superclass, class, subclass, superorder, order, suborder, superfamily, family, subfamily, tribe, genus, subgenus, species, subspecies, and infrasubspecific form, and make the corresponding changes throughout the revised English text, including the Glossary.

5. (The usage employed by the editors or printers of the text as published in Volume 14 of the *Bulletin of Zoological Nomenclature* is Phylum, Sub-Phylum, Super-Class, Class, Sub-Class, Super-Order, Order, Sub-Order, superfamily, family, subfamily, tribe, genus, subgenus, species, subspecies, and infrasubspecific form.)

DOCUMENT 1/55

(*continued from page* 691)

A propos de l'introduction des Parataxons dans la Nomenclature Zoologique

(Commission Reference : Z.N.(S.) 1056)

Par **GEORGES DEFLANDRE** et **MARTHE DEFLANDRE-RIGAUD**

(*Ecole Pratique des Hautes Etudes et Centre National de la Recherche Scientifique, Paris*)

(1) La classification morphologique (Ordo militaris de C. Croneis) au XIII^{e} Congrès international de Zoologie de Paris 1948.

L'initiative prise par Raymond C. Moore et P. C. Sylvester-Bradley relativement à l'introduction des parataxons (*) dans la Nomenclature zoologique nous incite à rappeler l'échec que nous avons subi en 1948, au 13$_{e}$ Congrès international de Zoologie à Paris, lorsque nous avons précisément proposé l'introduction dans la Nomenclature zoologique, du système imaginé par C. Croneis pour classer les sclérites d'Holothurides fossiles. Ce système répondait très exactement à toutes les objections soulevées à l'époque et, si nous avions été suivis, des règles eussent été alors instaurées qui auraient évité la naissance des imbroglios liés, par exemple, au développement (relatif) de nos connaissances sur les Conodontes.

2. Voici le texte de la communication rédigée en commun et présentée par l'un de nous en séance de la section X, Nomenclature, présidée par M. F. Hemming (Juillet 1948), communication intitulée " La nomenclature des Fragments fossiles (organites et sclérites) d'Invertébrés " et insérée dans le volume des Comptes Rendus du Congrès (p. 576).

3. " La tendance à l'utilisation, en micropaléontologie appliquée, de la totalité des vestiges organiques contenus dans les roches sédimentaires, conduit à un problème de nomenclature générale, auquel Croneis a proposé une solution. Ce problème se pose conjointement dans les domaines zoologique et botanique : il s'agit de la spécification et de la classification des fragments microscopiques d'organismes : organites ou sclérites *sensu lato* (p. ex. mâchoires d'Annélides, Conodontes, sclérites d'Holothurides, spicules divers). Un organite ou un sclérite peut parfois caractériser une espèce et recevoir un nom spécifique justifié. Plus souvent, il y a incertitude—ou même certitude opposée : l'objet considéré n'est pas spécial à une espèce, parfois pas même à un genre (certains spicules ou sclérites). Par nécessité pratique et en vue d'une utilisation stratigraphique, il y a lieu de désigner ces objets en leur appliquant les principes de la nomenclature binominale latine linnéenne. Cependant, pour répondre aux objections motivées de certains biologistes, pour éviter aussi des interprétations erronées (par ex. attribution à un genre, d'une ancienneté invérifiable, à la suite de l'emploi de son nom générique pour un microfossile), il y aurait lieu de bannir les termes d'*espèces*, de *genres*, etc., et d'éviter d'employer inconsidérément des noms de genres actuels. Croneis a proposé (1938, 1941, *Bull. Amer. Ass. Petrol. Geol.*, p. 1245) de substituer aux divers termes de la nomenclature biologique, les appellations en usage dans l'*Ordo militaris* romain : à la succession hiérarchique Classe-Ordre-Famille-Genre-Espèce, correspondrait exactement : Exercitus-Legio-Cohors-Manipulus-Centuria. En pratique, les trois derniers termes, la Cohorte, le Manipule, la Centurie, équivalant respectivement au rang de la famille, du genre et de l'espèce, sont appelés à être les plus usités. Avec Croneis, nous pensons qu'il est même plus commode de parler d'un *manipule*, que d'un *genre artificiel*, d'un *genre morphologique* ou d'un *pseudo-genre*. Une acception restrictive de ce dernier terme est d'ailleurs proposée d'autre part. Les appellations nouvellement introduites seront suivies respectivement de *cohors nov.*, *manip. nov.* ou *cent. nov.* Il est souhaitable qu'un manip nov. morphologiquement apparenté à un genre vivant, prenne son nom avec la désinence *ites*.

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* Les botanistes français ayant adopté le pluriel : des taxons (cf. H. Rabechault 1955) nous agissons de même pour parataxons, le changement de la désinence *on* en *a* n'étant pas une marque correcte du pluriel dans la langue française.

4. Dans l'ordre de recherches poursuivies par l'un de nous (M. D.-R., sclérites d'Holothurides), celui-ci propose dès à présent les manipules nouveaux suivants : *Chiridotites*, *Cucumarites*, *Myriotrochites*, *Stichopites* et *Synaptites* Defl.-Rig. *manip. nov.*, dont la diagnose sera donnée ultérieurement ".

5. La discussion qui a suivi cette communication a été finalement à l'origine de la décision mentionnée dans le document 1/1 (*Bull. zool. Nomencl.* **15** : 6) par R. C. Moore et P. C. Sylvester-Bradley, rejetant hors de la Nomenclature Zoologique, le système de Nomenclature morphologique de C. Croneis, dont nous préconisions l'adoption. Les termes de Croneis, que nous avions fait nôtres, considérés comme des " termes techniques ", exclus du domaine de la Nomenclature Zoologique étaient donc privés de la protection accordée par les Règles.

6. C'est d'ailleurs ce qui a été exprimé dans les termes suivants par R. C. Moore, dans un Digest joint à une circulaire de F. Hemming :

"Names treated as technical terms which are expressly rejected as zoological names lack government by the Laws of Homonymy and Priority as well as other regulations, thus promoting chaos in nomenclature."

7. Il est pour le moins curieux que dans aucun des textes récents dont nous avons eu connaissance—soit le fascicule extrait du *Bull. zool. Nomencl.* **15** : 1—70, soit le digest mentionné supra—il n'est fait allusion à la tentative de C. Croneis, l'auteur américain à qui l'on doit d'avoir proposé la première solution, explicitement développée dans son adresse de 1941 (Micropaleontology—Past and Future) mais qui remontait à 1938.

8. L'un de nous (M. D.-R.) avait, dès 1950, réagi assez vivement contre la décision de 1948, dans un travail sur les sclérites rotiformes des Holothurides fossiles, écrivant ce qui suit (*loc. cit.* p. 50) :

" Notre proposition à la Commission de Nomenclature du XIII^e^ Congrès International de Zoologie à Paris, a été mise en minorité et repoussée—au moins jusqu'au prochain Congrès—après une discussion qui s'est déroulée presque uniquement en langue anglaise. Outre l'esprit naturellement hostile aux innovations qui règne normalement dans cette Commission et qui ne pouvait que se manifester en l'occurence, le rejet a été motivé par des critiques basées sur le fait que certains des termes ci-dessus (comme *Legio*, *Centuria*) ont été déjà utilisés, avec des acceptions variées d'ailleurs, pour des unités systématiques secondaires, diversement intercalées dans la classification linnéenne. Cette objection—présentée comme fondamentale—me paraıt dénuée d'importance."

9. Dans le travail en question, comme dans un travail antérieur sur les *Synaptites*, le système de C. Croneis a été intégralement appliqué : tous les termes utilisés sont des parataxons au sens de R. C. Moore et P. C. Sylvester-Bradley.

10. Nous posons alors la question suivante : pourquoi la première partie de la proposition Moore/Sylvester-Bradley, créant le terme parataxon (impliquant une parataxinomie)* ne comporte-t-elle pas une terminologie adaptée, se substituant obligatoirement à la terminologie linnéenne ? Les auteurs pensent-ils utiliser les termes espèce, genre, famille, etc. . . avec leur signification simplement hiérarchique mais non linnéenne, ce qui pourrait paraître intolérable à beaucoup de systématiciens, ou pensent-ils proposer encore une terminologie nouvelle avec le même préfixe qu'ils ont choisi pour taxon : parespèce (paraspecies), paragenre (paragenus), parafamille (parafamilia), parordre (parordo), paraclasse (paraclassa) ?

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* Nous disons bien parataxinomie et non parataxonomie, en vertu de la recommandation de l'Académie des Sciences. (Séance du I^er^ Juillet 1957, C.R. t.245, pp. 125–127.)

11. Nous voulons espérer que, cette fois, la priorité de fait de C. Croneis incitera à adopter définitivement, en parataxinomie, la terminologie centurie-manipule-cohorte etc. . . qui, pratiquement, a déjà acquis un certain droit de cité par son introduction dans le Traité de Paléontologie (Edit. J. Piveteau) et dans le Traité de Zoologie (Edit. P. P. Grassé), pour les chapitres traitant des Coccolithophoridés (G. Deflandre) et des Holothurides (M. Deflandre-Rigaud).

12. Nous répétons encore que l'objection relative à l'emploi sporadique des termes *Legio* et *Centuria*, non objectivement et légitimement définis par certains classificateurs n'a pas lieu d'être prise en considération. On a d'ailleurs fait déjà remarquer que, dans la classification de Croneis, les termes hiérarchiquement supérieurs à la cohorte (famille) seront rarement utilisés.

(2) Les rapports entre la classification morphologique (Parataxinomie) et la classification naturelle, linnéenne (Taxinomie). Cas des sclérites sensu lato, des fragments squelettiques et dermiques, des organes ou organites partiels ou entiers.

13. Il ne s'agit pas, dans ce qui va suivre de discuter le contenu des Recommandations de Moore/Sylvester-Bradley (*loc. cit.* pp. 12–13) que nous supposerons entérinées (avec ou sans modifications) mais d'envisager le danger d'un divorce total, *dans l'esprit*, de la Taxinomie et de la Parataxinomie, vis-à-vis des avantages évidents d'une nette séparation dans la forme.

14. Ces réflexions nous sont suggérées en particulier par le travail " Monograph of Fossil Holothurian Sclerites " de Frizzel et Exline 1955, où les Règles de la Nomenclature zoologique ont été strictement appliquées à une classification morphologique prise dans son sens le plus absolu. En dehors de certains points particuliers, qui ne sauraient être exposés ici, parce qu'ils relèvent de discussions entre spécialistes, et auxquels M. Deflandre-Rigaud a fait allusion récemment (1957 b), il y a lieu de mettre en relief certains résultats illogiques flagrants acceptés par Frizzel et Exline.

15. Ces auteurs ont très honnêtement présenté leur classification comme un arrangement " non zoologique ", envisageant même la substitution des catégories de l'Ordo militaris, mais leur " Systematic Catalogue " énumère en fait *des familles* (de sclérites) et *des espèces* (de sclérites). Il apparaît évident que les auteurs ont voulu prendre une assurance contre l'invalidation éventuelle des termes utilisés ou créés par eux, précaution qui ne saurait leur être reprochée.

16. Par ailleurs, ils ont généralement et équitablement réutilisés les noms proposés par leurs devanciers et en particulier la majeure partie de ceux créés par M. Deflandre-Rigaud (manipules et centuries), tout en précisant, pour chaque nom repris, que celui-ci était à sa création " exclu ou hors de la nomenclature zoologique ".

17. Par contre, ils n'ont tenu aucun compte des essais de M. Deflandre-Rigaud, en vue d'une certaine harmonisation entre la classification des sclérites et celle, naturelle, des animaux dont ils proviennent (M. Deflandre-Rigaud 1952 et 1953). Ils ne pouvaient d'ailleurs guère faire autrement puisque leur présentation générale (leurs clefs dichotomiques en particulier), leur interdisait de penser à autre chose qu'aux seuls caractères morphologiques. Ainsi, leur monographie peut répondre pleinement—sauf critiques de détails—aux besoins et aux buts des stratigraphes, mais elle ne peut qu'induire en erreur des paléontologistes non dûment avertis, qui tenteraient de se faire une idée de l'évolution des Holothurides et de la chronologie de l'apparition de leurs divers types.

18. En voici un exemple frappant :

La *famille* des Theeliidae Frizzel et Exline 1955 (*l.c.*, p. 109) (Chiridotitesidae Deflandre-Rigaud 1957 : Theelia Schlumberger invalidé) comprend les *genres Protheelia* Frizzel et Exline 1955, *Acanthotheelia* Frizzel et Exline 1955, *Theelia* Schlumberger 1890 (non *Theelia* Ludwig 1889) synonyme de *Chiridotites* Defl.-Rig. 1948, *Hemisphaeranthos* Terquem et Berthelin emend. Frizzel et Exline (*Myriotrochites* Defl.-Rig. 1948, *Stueria* Schlumberger 1888, non *Sturia* Mojsisovics 1882) et enfin *Protocaudina* Croneis 1932.

19. Or les quatre premiers genres sont des sclérites rotiformes (en forme de roues) ayant appartenu sans aucune contestation possible à des animaux de l'Ordre des Synaptides, Super-ordre des Apoda, tandis que le cinquième, *Protocaudina*, rassemble des sclérites disciformes, sans moyeu central et sans véritables rayons, provenant d'animaux de l'Ordre des Elasipodes, super-ordre des Actinopoda.

20. D'autre part les sclérites du genre *Rhabdotites* Defl.-Rig. 1952 sont classés dans la famille des Stichopitidae Frizzel et Exline 1955, à côté des *Stichopites* Defl.-Rig. 1948 emend. Frizzel et Exline 1955. Ces derniers sont des sclérites d'Holothurides de l'Ordre des Aspidochirotes (Actinopoda) tandis que les *Rhabdotites* sont liés, comme les *Chiridotites*, aux Synaptides (Apoda).

21. Un autre exemple, non moins choquant du point de vue paléontologique, est le classement dans deux familles différentes, Synaptitidae Frizzel et Exline 1955 et Calcancoridae Frizzel et Exline 1955, des sclérites *en plaques* et des sclérites *en ancres* que l'on sait fort bien avoir appartenu aux mêmes animaux, du type *Synapta*.

22. Ce n'est, bien entendu, pas l'application logique d'un système de classification purement morphologique qui est critiquée ici, mais très exactement le rapprochement ou l'éloignement artificiels de vestiges d'animaux bien caractéristiques, par l'effet de la création de familles dont le polyphylétisme (d'ailleurs reconnu et noté plusieurs fois par Frizzel et Exline) ne se justifie pas par l'absence de données sur la position systématique naturelle des animaux porteurs des sclérites.

23. Nous n'avons, d'autre part, aucune critique semblable à présenter lorsqu'il s'agit de ranger des sclérites qui, dans la nature actuelle, ne sont caractéristiques ni d'Ordres, ni de familles, ni de genres, et parfois pas même d'espèces particulières. C'est ce que M. Deflandre-Rigaud a fait remarquer en 1952 (*loc. cit.* p. 4). Toutefois la création de *familles* ne s'imposait pas.

24. Nous pensons donc qu'il est possible (et souhaitable même) de réaliser pour des parataxons au niveau du genre (=manipule) et au niveau de l'espèce (=centurie) des classements dichotomiques pratiques, où se peuvent côtoyer des éléments morphologiquement apparentés, même s'ils sont systématiquement éloignés. Mais nous estimons qu'au niveau de la famille (=cohorte) les véritables affinités naturelles doivent être respectées. D'ailleurs, on reconnaîtra avec nous que la création de familles " purement morphologiques " n'apporte rien au point de vue de la science paléontologique : ce sont de simples numéros de tiroirs qui n'auraient d'intérêt que s'ils aidaient d'une façon extrêmement efficace lors des déterminations. Nous n'avons pas l'impression que ce soit le cas.

25. Des efforts doivent donc être faits pour que la Parataxinomie (classification des parataxons) ne devienne pas une science complètement séparée de la Taxinomie (classification des taxons) *avec une tendance à oublier l'origine des éléments dont elle s'occupe.*

26. On objectera peut-être que, dans ce qui précède, il n'est pas question de *Nomenclature* au sens strict, mais plutôt de *Taxinomie* ou de *Parataxinomie.* Nous répondrons : à quoi sert-il de discuter et de chercher un accord sur le contenant (les *termes* de la Nomenclature) si le contenu fait l'objet d'interprétations non précisées, ou même fondamentalement divergentes ?

27. Les remarques de principe qui ont été faites ici à propos des sclérites d'Holothurides peuvent éventuellement s'appliquer à des vestiges d'autres groupes d'animaux, microscopiques ou non, et il est possible que d'autres auteurs aient exprimé déjà des pensées analogues à propos de ceux qui sont énumérés dans la proposition Moore/Sylvester-Bradley (*loc. cit.* p. 12) : éléments squelettiques isolés de Spongiaires, d'Annélides, de plusieurs classes d'Echinodermes, Conodontes et certaines parties de Mollusques telles qu'opercules et éléments de radula de Gastéropodes, Aptychi de Céphalopodes Ammonoides—auxquels doivent s'ajouter les sclérites d'Alcyonaires (M. Deflandre-Rigaud 1955–1956–1957), les sclérites de Tuniciers-Ascidies (G. et M. Deflandre 1956) et enfin les Rhynchoteuthes (W. Quenstedt, 1951).

28. Dans leur ensemble tous les éléments de la présente discussion apportent néanmoins de très forts arguments en faveur de la création de la Parataxinomie en tant que science coordonnée avec la Taxinomie.

(3) Parataxinomie et Taxinomie chez les Protistes.

(a) Protistes vivants.

29. En ce qui concerne les Protistes libres l'institution d'une parataxinomie se limiterait éventuellement à quelques cas très particuliers. Jusqu'ici, lorsqu'un protozoaire (ou un protophyte) a présenté un cycle évolutif comportant des stades à morphologie particulière (par exemple stade flagellé, stade rhizopodique, stade enkysté) l'application de l'art. 27 des Règles a presque toujours été faite par les auteurs, et le nom le plus ancien utilisé pour l'ensemble des stades. Il en a été de même dans tous les cas d'alternance de génération (dimorphisme et même trimorphisme).

30. Cependant, il y a lieu de mentionner, parmi les Chrysomonadines, la famille (ou groupe) des Chrysostomatidae (Chrysostomataceae Chodat emend. Deflandre ; cf. Deflandre 1934^{a}) encore que l'on ait affaire ici à un cas très spécial et dont l'origine est notoirement micropaléontologique.

31. Il s'agit en effet, d'un rassemblement artificiel, d'après leur morphologie, de kystes siliceux de Chrysomonadines dont le stade végétatif (normalement flagellé, avec un stade rhizopodique ou un stade palmelloïde éventuels) *est inconnu.*

32. La plupart des kystes sont caractéristiques d'espèces mais ne sont pas caractéristiques de genres. Si une espèce actuelle (kyste), décrite dans le genre *Deflandreia* Freng. par exemple, était reconnue comme appartenant à un genre véritable de Chrysomonadine, parfaitement caractérisé (déjà connu ou nouveau), il ne viendrait pas à l'idée d'un protistologue d'utiliser ce nom de *Deflandreia* sous un prétexte de priorité.

33. Ainsi le type même du genre, *Deflandreia porteri* Frenguelli 1938, trouvé sur des plantes submergées en Argentine, ne saurait être employé, sans créer une intolérable confusion, pour un flagellé nouvellement découvert dont il serait le kyste. Tout se passerait donc, en fait, comme si *Deflandreia porteri* était un parataxon, obéissant à la Recommandation Moore/Sylvester-Bradley, (2), alinea (c).

34. Les noms de *Chrysostomatidae* vivants devraient donc, pensons nous, être considérés comme des parataxons, non transférables dans la Classification taxinomique. Par contre, et malgré un apparent paradoxe, les *Chrysostomatidae* fossiles (comme aussi les *Archaeomonadidae*) ne relèvent point de la Parataxinomie mais bien de la Taxinomie. En effet les *genres* et les *espèces*, fossiles, sont les seuls stades que nous connaîtrons jamais et ils sont essentiellement caractéristiques des êtres disparus qu'ils représentent. (Cf. G. Deflandre 1952, *Traité de Zoologie*, Ed. P. P. Grassé I (1), p. 561).

35. Pour ce qui regarde les Protistes parasites nous sommes parfaitement d'accord avec l'idée émise par J. Chester Bradley, rapportée par R. C. Moore et P. C. Sylvester-Bradley p. 6. L'introduction de la notion de parataxon peut apporter de la clarification dans certains domaines spéciaux.

(b) Protistes fossiles.

36. Les coccolithes seuls ont été cités par Moore/Sylvester-Bradley. Il y aura lieu de penser également aux écailles siliceuses de diverses Chrysomonadines (*Synura*, *Mallomonas*) dont la découverte et l'étude à l'état fossile (au moyen du microscope électronique) dans des diatomites d'eau douce n'est qu'une question de temps.

37. Un autre groupe de vestiges qui nous paraît devoir être traité dans le cadre de la parataxinomie est celui des spicules isolés de Radiolaires fossiles (plus spécialement des Collodaria), éventuellement des grandes cornes provenant de Sphaerellaires inconnues dans leur intégrité. Ces restes fossiles n'ont pas encore été étudiés systématiquement et peu d'auteurs les ont figurés : Bury (1860 et 1868), Tan Sin Hok (1926), Deflandre (1953 a).

38. A propos des Coccolithes très vraisemblablement, R. C. Moore, dans le Digest déjà cité, écrit " Indeed, the probably complete skeletal remains of some organisms assignable to protistan groups have been named by Deflandre using intended ' Technical term ' procedure whereas most authors would consider the published names (without regard to intent of the author) as undeniably acceptable zoological names. Here lies confusion ".

39. En fait, G. Deflandre (1952, *Traité de Zoologie*, I (1), et 1954) a parfaitement différencié, parmi les Coccolithes fossiles qu'il décrivait, ceux qu'il considérait comme essentiellement caractéristiques (nov. gen., nov. sp.) et ceux qui devaient, dans l'état des connaissances au moment de leur dénomination, être—provisoirement ou non--pris pour des types morphologiques non essentiellement caractéristiques (manip. nov., cent. nov.). C'est également la position qu'il a conservée au cours des discussions épistolaires qu'il a eues avec E. Kamptner (chargé de la rédaction du Chapitre dans le Treatise on Invertebrate Paleontology) afin d'aboutir à un accord sur la présentation de la classification des Coccolithophoridés fossiles.

40. Dans ces conditions, il serait absolument illogique de classer par principe et sans discrimination *tous les coccolithes isolés* dans des parataxons. C'est apparemment ce que demandent R. C. Moore et P. C. Sylvester-Bradley dans leur proposition, page 12, ligne 1, encore que la phrase : " Here belong all isolated skeletal elements of coccoliths " puisse prêter à confusion. En effet, elle évoque littéralement " des éléments squelettiques isolés de coccolithes ", c'est-à-dire des fragments de coccolithes. Or l'un de nous a précisement montré (G. Deflandre, 1953 b) *la pluralité* des éléments constitutifs des coccolithes, ces éléments, dans beaucoup de cas, n'étant visibles qu'au microscope électronique. Il est donc aujourd'hui permis de parler d'éléments squelettiques isolés de coccolithes (skeletal elements of coccoliths). On peut donner en exemple les petits segments vertébroides qui constituent les coccolithes annelés de *Syracosphaera carterae*, ou les segments analogues (de moins de deux dixièmes de micron) ainsi que les baguettes en rayons du coccolithe représenté par la figure 7 de G. Deflandre (1953 *loc. cit.*).

41. Nous ne pensons évidemment pas que ce soient ces éléments squelettiques minuscules qui sont pris en considération par les auteurs mais bien les *coccolithes entiers* isolés. R. C. Moore et P. C. Sylvester-Bradley ont, en fait, employé ici le terme *coccolithe* dans le sens d'un groupe d'animaux, alors que ce terme s'applique strictement aux minuscules sclérites dont l'assemblage forme la coque calcaire des Coccolithophoridés (terme zoologique, non mentionné dans le texte incriminé), ou Coccolithineae, Coccolithaceae, Coccolithophorae, Coccolithophorinae (termes botaniques).

42. Considérant donc que les auteurs ont entendu vraisemblablement ne faire aucune discrimination entre les coccolithes isolés pouvant caractériser des taxons et ceux auxquels est déniée cette qualité, nous nous élevons avec force contre cette position. Les types extrêmement caractéristiques auxquels ont été donnés par G. Deflandre les noms de *Stephanolithion*, *Sphenolithus*, *Micrantholithus*, *Polycladolithus*, *Clathrolithus*, *Isthmolithus* sont de véritables taxons, dont la valeur systématique est, *mutatis mutandis*, supérieure à celle des dents fossiles de mammifères. En opposition, les noms de *Discolithus* Kamptner, *Mitrolithus* Deflandre, *Rhabdolithus* Kamptner, *Parhabdolithus* Deflandre, *Scapholithus* Deflandre s'appliquent à des coccolithes isolés dont la morphologie *n'est pas caractéristique de genres*. Ce sont par conséquence des parataxons.

43. En conclusion nous demandons que, pour les Coccolithophoridés, il soit laissé aux spécialistes, seuls qualifiés, le soin de décider pour chaque cas, du classement *taxinomique* ou *parataxinomique* des types découverts ou décrits, en fonction de la valeur de leurs caractères morphologiques.

44. D'autre part, et toujours relativement aux Coccolithophoridés, nous tenons à préciser nos vues vis-à-vis de la dernière phrase de la Recommandation Moore/Sylvester-Bradley. (2)(c) : . . . names belonging to one category not being transferable to other (p. 13).

45. Qu'un nom nouveau, par exemple *Lophodolithus mochlophorus* manip. nov., cent. nov. G. Deflandre 1954 (p. 146) ne puisse pas devenir ultérieurement le genre *Lophodolithus* Defl. et l'espèce type *L. mochlophorus* Defl., apparaît comme un non-sens. Nous avons bien lu, p. 12, la longue procédure d'exception reposant sur les Pleins Pouvoirs de la Commission, qui permettrait le transfert mais nous affirmons que l'honnête précaution prise par un auteur vis-à-vis d'une entité nouvelle dont la valeur ne lui apparaît pas immédiatement ne doit pas être cause d'une sorte de pénalisation.

46. Dans le cas de *Lophodolithus*, la découverte d'une coque entière (coccosphère auctorum) fossile composée par des coccolithes du type décrit inciterait immédiatement le découvreur à considérer le microfossile comme *un genre* bien tranché. Le nom de *Lophodolithus* (manip.) devrait-il donc être rejeté, un nouveau nom *de genre* étant alors créé ?

47. Nous ne le pensons pas et nous proposons donc de faire suivre la phrase " les noms appartenant à une catégorie n'étant pas transférable dans l'autre " de l'addition suivante " excepté lorsqu'un parataxon sera reconnu capable de caractériser à lui seul un taxon, et que son nom pourra être transféré sans inconvénient ", soit : " except when a parataxon would be recognized to be able to characterize a taxon, his name being transferable without inconvenience ". Il doit être bien entendu que si le transfert visé était susceptible de créer une confusion, il devrait être soumis à la Commission, dont les Pleins Pouvoirs trouveraient leur application.

48. Nous abordons maintenant une question différente dans son fond, et nous la soumettons dans le cadre restreint des formes fossiles. Il s'agit de la position, dans l'un ou l'autre des systèmes de nomenclature, des genres dits " collectifs ", ou Sammelgenera, ou encore genres " omnibus " ou " d'attente ", dans lesquels sont rangées des " espèces " dont les spécimens étudiés montrent les caractères d'une famille mais n'ont pas conservé—par suite de leur fossilisation par exemple—les caractères permettant de déterminer leur attribution générique.

49. Un bon exemple est le genre *Palaeoperidinium* Deflandre 1934b qui réunit " les Dinoflagellés à physionomie de *Peridinium*, dont la tabulation quoique présente . . . ne permet pas de les classer avec sûreté " dans un genre défini. 17 espèces de *Palaeoperidinium* ont été décrites entre 1934 et 1957, deux autres espèces ont été classées sous ce nom et enfin, divers auteurs ont, au total, publié 28 figures de *Palaeoperidinium* spec. ou spec. ind. pour des spécimens considérés comme insuffisamment caractéristiques pour recevoir un nom spécifique (échantillons uniques, ou brisés, ou déformés). Deux espèces, à la suite de l'étude de meilleurs échantillons, ont été transférées dans d'autres genres : *P. cayeuxi* Defl. 1934 devenu le type du genre *Phanerodinium* Defl. 1937 et *P. spinosissimum* Defl. 1938 classé en 1955 dans le genre *Palaeohystrichophora* Defl. 1934. Ce processus est normal et lié au progrès, ce qui, dans l'esprit du créateur du genre, motivait justement la création d'une appellation attirant l'attention des spécialistes.

50. Logiquement, il nous paraît que *Palaeoperidinium* devrait être considéré comme un parataxon : le manipule *Palaeoperidinium*, avec des centuries comme *P. alatum* Conrad 1941, *P. caulleryi* Defl. 1934, *P. mosaicum* Downie 1957 etc. . .

51. Puisque la création de la Parataxinomie est justifiée précisement par le coefficient d'incertitude attaché à un spécimen donné, coefficient d'incertitude qui empêche d'en faire un taxon, le cas de *Palaeoperidinium* relève de la parataxinomie.

52. Si ce point de vue est adopté, il sera nécessaire de complèter la définition de l'expression " parataxon " ainsi qu'il suit :

" un parataxon est une catégorie taxinomique comprenant des fragments isolés, des vestiges incomplets ou des stades évolutifs d'animaux . . . " soit, en langue anglaise :

" a parataxon is a taxonomic category comprising discrete fragments, incomplete remains or life-stages of animals . . . "

53. A quoi nous ajoutons, bien entendu, que corrélativement, la faculté de transfert évoquée ci-avant devra être admise.

(4) Emploi de la Parataxinomie pour les groupes de position systématique non définie (Incertae sedis)

(a) Cas général des organismes Incertae sedis, fossiles et actuels.

54. La règlementation de l'emploi de la parataxinomie est nécessaire et les alinéas d'un nouvel article (Recommandations, p. 13, (b)(i) et (ii) stipulant les conditions requises sont parfaitement justifiés.

55. Cependant il est un cas—relevant surtout de la micropaléontologie—où il nous paraît qu'un spécialiste doit être libéré de la demande d'application et par conséquent doit pouvoir utiliser immédiatement, s'il le juge à propos, les termes parataxinomiques. C'est le cas des microorganismes *Incertae sedis*, des microorganismes dont la position systématique est ou complètement inconnue, ou extrêmement douteuse et discutable, que l'on ait ou non des raisons d'espérer obtenir d'ultérieures précisions par des progrès futurs.

56. En exemple on peut proposer les genres *Tytthodiscus* Norem 1955 et *Tasmanites* Newton 1875, dont les affinités restent très obscures d'après A. Eisenack (1957). Ce dernier auteur pense à les classer parmi les Hystrichosphaeridea, tandis que Sommer (1956) a créé une famille d'Algues incertae sedis, Tasmanaceae, pour le seul genre *Tasmanites* Newton emend. Schopf, Wilson et Bentall, tout en paraissant ignorer le travail de Norem (1955) sur *Tytthodiscus*. Il y a là matière à discussion, d'autant plus que l'on connaît, dans le Lias de France, des microfossiles analogues, que nous avons revus. Maurice Dreyfuss (1933) qui les a décrits, sans les nommer, voit en eux des oeufs de petites Ammonites, hypothèse qui demeure vraisemblable. Il n'en reste pas moins que ces microorganismes Incertae sedis, devraient relever de la parataxinomie.

57. Avant d'aborder le domaine du microplancton fossile, signalons encore l'existence, trop souvent négligée, dans le plancton de nos océans actuels, d'un bon nombre de micro-organismes de morphologie variée, dont la place, dans nos classifications, est ou totalement inconnue, ou seulement partiellement soupçonnée. Citons par exemple la série des genres *Echinum*, *Polyedricum*, *Sphaeropsis*, *Piropsis*, *Fusopsis*, *Polyasterias*, *Pterosperma*, *Glyphosperma*, *Radiosperma* étudiés par Meunier (1910) dans le microplancton des Mers de Barents et de Kara.

58. Tous ces organismes Incertae sedis, dont beaucoup représentent des stades évolutifs (Kystes ou Oeufs) d'organismes planctoniques encore indéterminés, ne doivent-ils pas prendre place dans une classification parataxinomique ?

59. C'est pourquoi nous proposons que :

" la décision de la Commission ne sera pas nécessaire lorsqu'il s'agira d'un organisme de position systématique inconnue. Le premier descripteur pourra, s'il le juge bon, décider immédiatement de l'utilisation de la classification et de la nomenclature parataxinomiques. Toutefois, un transfert ultérieur sera soumis à la règle générale ".

L'adoption de cette suggestion nécessiterait simplement l'adjonction, à la fin du paragraphe (b) (i) du nouvel article proposé par R. C. Moore et P. C. Sylvester-Bradley, d'une phrase telle que :

" exceptionnellement un groupe Incertae sedis pourra être immédiatement admis et simplement signalé dans le Bulletin of Zoological Nomenclature, mais son transfert éventuel sera soumis à la règle générale "

ou, en langue anglaise :

" exceptionally a group (of) Incertae sedis could be immediately admitted and only inserted in the *Bulletin of Zoological Nomenclature*, the transfer being nevertheless submitted to general rule ".

(b) Cas du groupe des Hystrichosphaeridés et des relations avec la nomenclature botanique.

60. Les Hystrichosphaeridés constituent présentement le type parfait du groupe Incertae sedis. Ce qui précède leur est donc parfaitement applicable. Hormis une brève appellation rappelant certaines affinités végétales (G. Deflandre 1936, Les Flagellés fossiles, p. 61), la nomenclature zoologique a été pratiquement appliquée aux Hystrichosphères sensu latissimo, depuis les formes du Précambrien jusqu'à celles du Tertiaire. Le grand développement de l'étude systématique des Hystrichosphères (six genres bien établis en 1937 : *Hystrichosphaera* O. Wetzel, *Hystrichosphaeridium* Deflandre, *Micrhystridium* Deflandre, *Membranilarnax* O. Wetzel, *Cymatiosphaera* O. Wetzel et *Cannosphaeropsis* O. Wetzel,—une vingtaine de genres et de nombreuses espèces en 1957) n'a pas encore apporté d'indications valables sur la signification et la position systématique de tous les types qui y ont été rassemblés. Il reste toujours vraisemblable que certaines Hystrichosphères peuvent avoir une origine végétale, ainsi des botanistes seront éventuellement en droit de leur appliquer leurs règles de nomenclature.

61. Nous préconisons dès à présent l'admission des Hystrichosphaeridés au sens de l'Ordre des Hystrichosphaerida Eisenack 1938, Hystrichosphaeridea Eisenack 1954, compte tenu des extensions, emendations, additions publiées depuis la dernière date) parmi les groupes auxquels seront appliquées la classification et la nomenclature parataxinomiques.

62. Ceci nous amène à évoquer à nouveau les relations entre la Nomenclature Zoologique et la Nomenclature Botanique.

63. Les spécialistes qui ont étudié les Coccolithophoridés depuis un demi-siècle, étaient ou sont eux-mêmes des océanographes, des botanistes, des zoologistes et, bien entendu, des protistologues.

64. Depuis la première monographie de l'océanographe Lohmann (1902), les principales mises au point qui ont été publiées sont l'oeuvre du botaniste et hydrobiologiste J. Schiller (1930 : Coccolithineae in Rabenhorst's Kryptogamen-Flora), du protistologue et micropaléontologiste G. Deflandre (1936, in Les Flagellés fossiles—et 1952 in *Traité de Zoologie*, éd. P. P. Grassé, I, fasc. 1), la prochaine devant être celle de l'algologue et paléobotaniste E. Kamptner (in Treatise on Invertebrate Paleontology).

65. Grâce aux relations confiantes et suivies entretenues par ces deux derniers auteurs la nomenclature des coccolithes fossiles a été réalisée dans de bonnes conditions, évitant en particulier d'inutiles synonymies, malgré les tendances de l'un à s'en tenir d'abord à la nomenclature botanique, et celles de l'autre à tenter d'harmoniser nomenclature zoologique et nomenclature botanique.

66. Mais cet accord particulier ne saurait dispenser de la recherche d'un accord général entre zoologistes et botanistes et dans le cas présent de la Parataxinomie il serait hautement désirable qu'il fût réalisé dans le plus bref délai.

67. L'exemple concret suivant peut être cité à l'appui de ce voeu.

68. L'un de nous pense depuis fort longtemps à instaurer (ou à faire instaurer par un collaborateur) une classification des " spores " ou " endocystes " des Diatomées marines les plus anciennes (Crétacé et Eocène inférieur). Il s'agit là, indubitablement, d'objets parallélisables avec les spores de cryptogames et les pollens de phanérogames, et qui devraient donc être gouvernés selon les règles parataxinomiques.

69. Aussi nous suggérons dès maintenant, consécutivement à l'adoption de la Proposition R. C. Moore/P. C. Sylvester-Bradley sur la nomenclature des parataxons qu'un voeu soit émis tendant à :

" la création d'une Commission mixte composée de zoologistes et de botanistes, chargée de réaliser une harmonie dans la nomenclature des parataxons par l'adoption de règles communes ".

Résumé

(1) Rappel de la proposition faite par les auteurs au 13^{e} Congrès International de Zoologie en 1948, de l'introduction d'un système de nomenclature morphologique dans la Nomenclature Zoologique, et de son échec en Commission. Priorité de l'Ordo militaris de C. Croneis sur toute autre terminologie à utiliser en parataxinomie.

(2) Danger d'introduction de parataxons d'ordre hiérarchique supérieur au genre, en faisant totale abstraction de la classification taxinomique et des relations naturelles des parataxons d'ordre générique ou spécifique. Utilité et commodité des clefs dichotomiques, inutilité de la création de familles (cohortes) purement morphologiques.

La Parataxinomie ne doit pas devenir une science complètement séparée de la Taxinomie, tendant à oublier l'origine des éléments classifiés.

Néanmoins tous les cas discutés apportent de très forts arguments en faveur de la création de la Parataxinomie en tant que science coordonnée avec la Taxinomie.

(3) Protistes vivants libres : certaines Chrysomonadines (Chrysostomatidae) relèvent d'une classification parataxinomique.

Protistes fossiles :

— Devraient être classés dans des parataxons : les écailles siliceuses fossiles de diverses Chrysomonadines, les spicules et les cornes isolées de Radiolaires.

— Devrait être laissée aux spécialistes, pour les coccolithes fossiles isolés, la faculté de décider du classement taxinomique ou parataxinomique de chaque type considéré, en fonction de la valeur de ses caractères morphologiques.

— L'exemple de certains coccolithes conduit à proposer le transfert sans procédure parataxon-taxon, et l'addition dans le nouvel article : . . . n'étant pas transférable dans l'autre " excepté lorsqu'un parataxon sera reconnu capable de caractériser à lui seul un taxon et que son nom pourra être transféré sans inconvénient ".

— Devraient être classés dans des parataxons les genres dits " collectifs ", " omnibus ", " d'attente ", " Sammelgenera ", où sont rangés des spécimens montrant les caractères d'une famille mais non ceux, caractéristiques, d'un genre (cas de certains Dinoflagellés fossiles). Addition proposée à la définition du parataxon : . . . des fragments isolés, " des vestiges incomplets ", . . .

(4) Devraient être classés immédiatement dans des parataxons, sans nécessiter l'avis de la Commission, les organismes Incertae sedis (vivants ou fossiles) lorsque leur premier descripteur le juge nécessaire. Addition proposée : " exceptionnellement, un groupe Incertae sedis pourra être immédiatement admis et simplement signalé dans le Bulletin of Zoological Nomenclature, mais son transfert éventuel sera soumis à la règle générale ".

— Les Hystrichosphaeridés, type parfait du groupe Incertae sedis sont proposés à l'admission dans la Nomenclature et la Classification parataxinomiques. Les affinités végétales de certaines Hystrichosphères, celles de divers groupes de Flagellés (Phytoflagellés), comme les Coccolithophoridés, rendent désirable un accord entre zoologistes et botanistes. Il est proposé qu'un voeu soit émis, tendant à " la création d'une commission mixte composée de zoologistes et de botanistes, chargée de réaliser une harmonie dans la nomenclature des parataxons par l'adoption de règles communes ".

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English Translation of the " Resumé " to Professor and Madame Deflandre's paper prepared at their request in the Office of the Commission

Summary

(1) Recalling the proposition made by the present authors to the Eighteenth International Congress of Zoology in 1948 to introduce a morphological system of nomenclature into zoological nomenclature and how the proposition was defeated by the Commission. Priority of C. Croneis's Ordo militaris over any other terminology to be used in parataxonomy.

(2) Risks of introducing parataxa higher than the genus category without taking into consideration the taxonomic classification and the natural relationship of generic and specific parataxa. Utility and convenience of dichotomic keys, uselessness of creating purely morphological families (cohorts).

Parataxonomy must not become a science completely detached from Taxonomy with a tendency to forget the origin of the classified elements.

However, all the cases discussed furnish very strong arguments in favour of creating Parataxonomy as a science co-ordinated to Taxonomy.

(3) Free living Protists : certain Chrysomonadins (Chrysostomatidae) come under parataxonomic classification.

Fossil Protists : The following should be classified in parataxa : fossil silicon scales of various Chrysomonadins, the spicules and isolated horns of Radiolaria.

As regards the taxonomic or parataxonomic classification of isolated fossil coccoliths, this should be left for specialists to decide, and each type under consideration should be decided according to the value of its morphological characteristics.

The example of certain coccoliths leads to the suggestion of the parataxon-taxon transfer, without proceedings, and the addition to the new Article of : . . . not being transferable into the other " with the exception of a parataxon being admitted as characterising on its own a taxon, when its name could be transferred without any inconvenience ".

Genera called " collective ", " omnibus ", " temporary " and " Sammelgenera " should be classified in parataxa, these containing specimens showing characteristics of a family, but not those of a genus (the case of certain fossil

Dinoflagella). Suggested addition to the definition of parataxa : . . . isolated fragments, " incomplete remains " . . .

(4) Organisms of Incertae sedis (living or fossil) should be classified in parataxa immediately, without seeking a decision from the Commission, if their original author thinks it necessary. Suggested addition : " exceptionally, a group of Incertae sedis could be admitted without delay and merely published in the *Bulletin of Zoological Nomenclature*, but its eventual transfer to be subject to the general rule ".

It is suggested that Hystrichosphaerida, being perfect types of the group of Incertae sedis, should be placed in the parataxonomic nomenclature and classification. The vegetal affinities of certain Hystrichospheres, namely those of various groups of the Flagellata (Phytoflagellata), like the Coccolithophorida, call for an agreement between zoologists and botanists respectively. It is suggested that a Resolution should be formulated to " call into existence a Mixed Commission consisting of both zoologists and botanists, with the view to creating harmony in the nomenclature of parataxa through the adoption of common rules ".

DOCUMENT 1/56

Comment on the Moore/Sylvester-Bradley " Parataxa " Plan

(Commission Reference : Z.N.(S.) 1056)

By **CHARLES DOWNIE**

(*University of Sheffield, Department of Geology, Sheffield*)

(Letter dated 8th February 1958)

Mr. Sylvester-Bradley has asked me to write to you repeating what I had already said to the Palaeontological Association concerning parataxa. The following is extracted from a letter which was read to the meeting.

2. A dual nomenclature has long been used by students of fossil coccoliths and coccolithophores. The practice has been to use the taxa " species " and " genera " for complete tests. Each test is, however, composed of a number of small plates (coccoliths) and it is much more common to find isolated plates than whole tests. The taxa used to classify the coccoliths are the " centuria " and " manipules " of Croneis (1941). Since this classification has not been accepted by the International Trust for Zoological Nomenclature, all the names used are invalid. Nevertheless workers in this field, almost without exception, continue to use these illegal taxa because a dual nomenclature is necessary. Among recent papers using Croneis's classification and introducing new " manipules " are those of Deflandre (1954) and Noel (1956).

3. Because :—

(1) coccoliths of different shape make up a single coccolithophore test ;

(2) coccoliths indistinguishable in shape occur in different species of coccolithophore ;

(3) many varieties of coccolith are known that have never been seen in a complete test,

many coccoliths cannot be given a species name without the risk of error or causing confusion at a later date. The situation parallels that in the conodonts and it is quite clear that a dual nomenclature is required. Unless an "official" one is provided the outlawed system will continue to be used.

4. The system of parataxa suggested by Moore and Sylvester-Bradley appears to be suitable for application to coccoliths. Names already introduced for "manipules" and "centuria" could easily be transferred without causing confusion.

5. I therefore wish to support the incorporation of parataxa in the International Rules of Zoological Nomenclature.

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DOCUMENT 1/57

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "
(Commission Reference : Z.N.(S.) 1056)

By **W. D. IAN ROLFE**

(*University of Birmingham, Birmingham, England*)

(Enclosure to letter dated 12th February 1958)

I have followed the deliberations of the Palaeontographical Society and the Palaeontological Society over the parataxa problem with some interest, having recently been examining some isolated scolecodonts from the Silurian of Lanarkshire. The Moore/Sylvester Bradley proposals (1957, *Bull. zool. Nomencl.* **15** : 5–13) for the employment of a parataxon concept in the case of conodonts have been amply proved, but perhaps less so in the case of holothurian spicules and ammonite aptychi (P. C. Sylvester-Bradley, *ibid* :229 and J. S. Hampton, *ibid* : 245–246). From a study of the literature, however, the problem of taxonomic nomenclature in the scolecodont group appears to be at least as acute, if not more so, than that in the conodonts, indeed I believe that Professor Rhodes discussed scolecodonts at the recent Joint Meeting, but that no Resolution was passed concerning them.

2. The earliest workers on this group recognized the existence of such taxonomic problems many years ago (e.g. G. J. Hinde, *Quart. J. geol. Soc.* **35** : 387), but only recently has any attempt to resolve the dualism of neontological and palaeontological species concepts been made. F. W. Lange (1949, *Bull. Amer. Paleont.*, **33** (No. 134) : 1–102) states the problem quite clearly, but repudiates any " artificial and transitory taxonomy " as the " basis for a valid systematics ", while nevertheless admitting the " excuse " for its employment to be of " importance for stratigraphic correlation " (*ibid* : 54). His list (: 53) tentatively groups nine of these genera established on isolated elements, into his one new, true genus *Paulinites*. Obviously we have here an exactly analogous situation to that analysed by the parataxa plan proposers (*Bull. zool. Nomencl.* **15** : 16–18) in the case of the conodont genera *Duboisella* and *Scottognathus* Rhodes.

3. The use of some such distinct category as envisaged by the Moore/Sylvester-Bradley proposals would thus allow the no less than twenty-six " species " of the nine pseudo-genera *Diopatraites*, *Marphysaites*, *Nereidavus*, *Leodicites*, *Ildraites*, *Oenonites*, *Eunicites* Eller, *Arabellites* Hinde and the

Lumbriconereites of Stauffer (Lange's " form-genera " : 53) to be tentatively regarded as parataxa of the true genus *Paulinites* established much later by Lange in 1947 (*Arq. do Mus. Parana.* 6 (art. 5) : 161–230) in defiance of all present rules of Priority.

4. Thus both the stratigrapher and the taxonomist would be satisfied ; the former would be more forcefully reminded of the inadequacy of his material, and the limitations of it, if he had to record his forms not as a Linnean genus, but with the stigma of a prefix as recently proposed, to distinguish his parataxa from more respectable genera. It would seem better to suffer this stigma rather than to positivistically procrastinate, as Hinde himself did in 1879, in the forlorn hope that all discrete-part nomenclatures will eventually be disposed of. To condone the present system which seems likely to encourage further spasms of genus-creation appears to be rather a defeatist attitude ; some such prefix as suggested would serve as a constant reminder to those employing the fossil of its doubtful nature.

5. The undoubted existence of ontogenetic, as well as inter-individual variation, in the number of teeth present in a plate, complicates the scolecodont problem even further. Until many more specimens have been adequately described then, we cannot hope to know their stratigraphic value ; it seems essential to give them some form of appellation and yet most modern, conscientious palaeontologists would now be too chary to risk erecting even a new species for such elements, if the term species is to convey any non-morphological (i.e. biospecific or " evolutionary plexus ") sense whatever (v. P. C. Sylvester-Bradley, 1956, in *The Species Concept in Palaeontology* : 2).

6. The provision of a parataxa terminology would thus be a boon to those wishing to describe forms in order to obtain and provide comparisons with forms of similar age and appearance, and yet not endowing the particular individuals with the immutable status of a Linnean taxon.

7. It would seem further that the very use of such unsatisfactory terms as pseudo-genera and " species ", as employed above, in order to adequately express Lange's solution of one particular scolecodont problem argues for the introduction of some para-taxic terminology—it is not mere tautology.

8. A vicious circle is thus being set up ; unwilling to create species for such morphologically-determined elements, the palaeontologist must under existing nomenclatorial rules omit to describe them, yet if they remain undescribed their true specific or generic status cannot be ascertained. It seems that the proposals must be adopted for the scolecodont situation, which in Lange's well documented case is completely comparable with Rhodes's conodont assemblage-genera, if any clarification of the situation is required.

DOCUMENT 10/4

(*continued from page* 691)

A further note on the Language of the Substantive Texts

(Commission Reference : Z.N.(S.) 1259)

By **CURTIS W. SABROSKY**

(*Entomology Research Division, Agricultural Research Service, U.S. Department of Agriculture, Washington, D.C., U.S.A.*)

(Enclosure to letter dated 25th February 1958)

The historical survey of this question, published as Document 10/2 by Mr. Hemming following my proposal in 10/1, incorrectly (par. 3, p. 215) presents the substance of my proposal, and thus, regrettably, places it in an unfortunate light.

I did not and do not recommend that the French text (which must inevitably be compiled from, and certainly should be an exact translation of whatever English text is adpoted at London) " shall rank as ' an official French translation ' and not as a ' substantive text ' ", as Mr. Hemming has phrased it. My proposal (*cf. Bull. zool. Nomencl.* **15** : 211, par. 4) uses different words than Professor Spärck's Minute on the Subject (*cf. Copenhagen Decisions zool. Nomencl.* : 128, last three lines), but the meaning is exactly the same : that both the French and English texts are to be regarded as substantive texts, i.e., they shall have equal force. Stated in another way, my proposal is that the London Congress approve and adopt for the new Code the direction contained in the Minute executed by Professor Spärck as President of the Fourteenth Congress.

Note by the Secretary : I much regret if in my Historical Survey (paragraph 3 on page 215) I inadvertently misunderstood the nature of the proposal submitted by Dr. Sabrosky in his letter of 17th October 1957 (reproduced in Document 10/1 on pages 210–211). I certainly supposed that the expression " the official French translation " used in conjunction with the expression " the Congress-approved English text " was intended to suggest that, althouth both texts were to " have equal force ", the English text, as being " Congress-approved ", was in some way to be superior to the " official French translation ". I am very glad now to learn that this was not Dr. Sabrosky's intention and that the purpose of his original paper was to recommend the endorsement by the London Congress of the directions contained in the Minute executed by Professor Spärck as President of the Copenhagen Congress under which " the French text is the substantive text of the Rules and so also is the English text " (see page 128 (English text of Professor Spärck's Minute) and 129 (French text of that Minute) in *Copenhagen Decisions on Zoological Nomenclature* (int'ld F.H. 10th February 1958).

DOCUMENT 21/2

(*continued from page* 336)

Draft " Règles ", Article 28, Section 11 (gender to be attributed to certain classes of generic names) : certain amendments in wording and arrangement suggested

(Commission Reference : Z.N.(S.) 996)

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Enclosure to a letter dated 15th January 1958)

In a paper dealing with the grammatical formation of family-group names, I have embodied some suggestions made by Professor L. W. Grensted, involving a correction to Decision 50(1)(a) of the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 34). These suggestions apply equally to the gender of generic names, and reference should be made for details to the paper which I have submitted on this subject.[1]

2. Accordingly I drew up a draft of the present paper proposing some necessary changes in Decision 84 of the Copenhagen Congress.[2] I submitted it to Professor Grensted for his criticism, and received his unqualified approval ; but in the same mail I received (as a commissioner for voting) a proposal from the Secretary of the Commission for a *Declaration* involving part of the same matter. I have, therefore, found it necessary to revise my paper in order to bring it into conformity with the purport of the proposed *Declaration*, which I hope will be adopted.[3]

3. I therefore now suggest that in Section 11 of Article 28 of the Draft of the Revised *Règles* the passages embodying Decision 84 of the Copenhagen Congress should be modified to the extent now seen to be necessary as indicated below.

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[1] The paper here referred to has been placed on the London Agenda Paper as Document 20/1. See pp. 331—333 of the present volume.

[2] For the text of the decision by the Copenhagen Congress here referred to see 1953, *Copenhagen Decisions zool. Nomencl.* : 49–51.

[3] The proposal here referred to was approved by the Commission on 16th June, 1957 and was published as *Declaration* 36 on 24th January, 1958 (*Ops. Decls. int. Comm. zool. Nomencl.* **18**: i—xii)

4. The Greek word ὤψ (ōps) : Professor L. W. Grensted, Consulting Classical Adviser to the Commission, writes that ὤψ (ōps) involves a complicated story as to its gender. It is mostly masculine, once neuter, and, by a medieval grammatical conjecture only, given as feminine in spite of the classical evidence. It is given as feminine in Liddell & Scott's Greek Lexicon, but reference is also made to its usage in the masculine and neuter genders. These facts have led me to insert a provision under which it can be accepted in any gender.

5. Latinization versus transliteration : It should be noted that " cheilus " is not a transliteration of the Greek χεῖλος but is a Latinization of it, as pointed out by Professor Grensted in Document 21/1. The transliteration of χεῖλος is cheilos. Appendix F of the old Rules is misleading in stating that the table of which it consists indicates the manner in which Greek words should be transliterated, when it should say Latinized. Transliteration, for example, of final " ον " is " on ", of " ος ", " os ", but their Latinization is respectively " um " and " us ".

Proposed Amendment of Article 28, Sect. 11, of the Revised English Text of the " Règles " (Bull. Zool. Nomencl. 14 : 208–215)

P.208, line 7, replace with : (a) **Classical nouns with unaltered case-endings.**—If the name consists of or terminates in a Greek or Latin word without change in its nominative case-ending

P.209, following line 5, insert :

> (b) **Classical nouns with altered case-endings.**—If a Greek or Latin word used as a generic name has been modified by the substitution of a different case-ending, the gender shall be that appropriate to the case-ending.

Example : Names ending in the Greek neuter word " -στόμα " (stoma) are neuter in gender, but if the Latin nominative case-ending " -us " has been substituted for " -a ", then the name becomes a Latin second declension masculine noun.

P.209, line 6, for " (b) " read " (c) ".

P.210, line 14, for " (c) " read " (d) ".

P.211, line 5, for " (d) " read " (e) ".

P.211, add after line 21 :

(A) **Masculine names.**—The following names, among others, are to be treated as masculine :

(α) Any name the final part of which is a Greek word that has been Latinized by the substitution of a masculine Latin nominative case-ending for the original Greek ending, even though the Greek word was of another gender. But this shall not apply to Greek words that were Latinized by the Romans, and that are given another gender in Latin lexicons (*cf.* paragraph (a)(ii) preceding).

Examples : " -cheilus " and " -cheila " from the neuter word *χείλος* (cheilos); "-gnathus", from the feminine word *γνάθος* (gnathos); "-rhamphus", from the neuter word *ῥάμφος* (rhamphos) ; " -rhynchus ", from the neuter word *ῥύγχος* (rhynchos); and "-stethus" from the neuter word *στήθος* (stethos).

P. 211, line 22, read : (β) Compound Latin nouns terminating

P. 212, after line 6, add .

(γ) Words terminating in " -ōps " from the Greek word *ὤψ* (ōps), face (but not in " -ops " from *ὄψ*, *cf.* subparagraph B (γ). However, names ending in " -ōps " from *ὤψ*, shall be accepted in whatever gender their author establishes them, preference being given, in case of uncertainty, to the masculine gender.

P. 212, line 7, for " (ii) " read " (B) ".

P. 212, after line 9, add :

(α) A Greek word that has been Latinized by the substitution of a feminine Latin nominative case-ending for the original Greek ending, even though the Greek word was of another gender. But this shall not apply to Greek words that were Latinized by the Romans, and that are given another gender in Latin lexicons (*cf.* paragraph (a)(ii) preceding).

(β) A name terminating in a Greek feminine noun without changed nominative case-ending.

Examples : " -gaster " from *γαστήρ* (gastēr) ; " -gnathos " (but not " -gnathus ") from *γνάθος* (gnathos) ; and " -lepis ", from *λεπίς* (lepis).

Here belong also names such as Chlorops that terminate in “ -ops ”, coming from the feminine Greek noun ὄψ (ops), voice (but not ordinarily the much commoner names that terminate in “ -ōps ” from ὤψ (ōps), face, *cf.* subparagraph A(γ) preceding), and those that terminate in “ -opsis ” from the feminine Greek noun ὄψις (opsis), appearance.

P. 212, line 10, for “ (1) ” read “ (γ) ”.

P. 212, line 18, for “ (2) ” read “ (δ) ”.

P. 212, delete lines 22 through 29.

P. 213, for lines 1 and 2 substitute :

(C) **Neuter names.**—The following names, among others, are to be treated as neuter : Any name the terminal element of which is

(α) A Greek word that has been Latinized by the substitution of a neuter Latin case-ending for the original Greek ending, even though the Greek word was of another gender. But this shall not apply to Greek words that were Latinized by the Romans, and that are given another gender in Latin lexicons (*cf.* paragraph (a)(ii) preceding), or

P. 213, line 3, for “ (1) ” read “ (β) ”.

P. 213, line 7, for “ (2) ” read “ (γ) ”.

P. 213, line 13, for “ (e) ” read “ (f) ”.

P. 214, line 5, for “ (f) ” read “ (g) ”.

P. 214, line 22, for “ (g) ” read “ (h) ”.

P. 215, after line 9, add :

(j) **Authority of the Commission.**—In order to conserve established usage the Commission shall have authority, without recourse to its Plenary Powers to fix the gender of any particular name that it adds to an *Official List*, even contrary to the preceding rules, if that be necessary.

6. Copenhagen Decision 84(3) reads : " Where a Greek or Latin word has . . . been modified by the addition of a nominative suffix the gender becomes that of the suffix (thus nouns ending in " *-stomus* " are to be treated as masculine, although those ending in " *-stoma* " are neuter) ". I have discussed the difficulties in interpreting this paragraph, particularly in view of the inappropriate examples used. In the paragraph entitled " Discussion : Gender of generic names " annexed to Section 11(b) of Article 28 of the Draft of the Revised English text of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 209, line 11, to 210, line 7), I endeavoured in the provision inserted as Section 11(c) (: 210) to interpret what the framer of the resolution appears to have intended to convey. The matter has subsequently been clarified in a further note by myself which has been published in the London Agenda Paper as Document 20/1 (1958, *Bull. zool. Nomencl.* **15** : 332, paragraph 4) and also by Professor Grensted in the Report on the gender of generic names which forms Document 21/1 (1958, *ibid.* **15** : 334–336). The amendments proposed in the present document are intended to put into effect the facts that Professor Grensted has pointed out, namely :—

(a) If the word is taken over from Greek into Latin without change in the nominative case-ending it retains the gender that it had as a Greek word.

(b) If the word has been Latinized by substitution of a Latin case-ending, the gender of the new Neo-Latin name becomes the gender indicated by the new Latin nominative case-ending.

7. In the note entitled " Explanation and examples dealing with compound nouns, the final element of which is a classical noun " inserted in the Draft of the Revised *Règles* at the end of Section 11 of Article 28 (1957, *Bull. zool. Nomencl.* **14** : 211 *et seq.*), it has been necessary to re-word the paragraphs dealing respectively with masculine, feminine and neuter names to bring them into accord with the principles above stated.

8. Finally, necessary changes in the examples have been introduced to accord with facts pointed out by Professor Grensted, particularly as regards the Greek words " ὄψ " and " ὤψ ".

DOCUMENT 25/10

(*continued from page 556*)

Order/Class Names : A new proposal

(Commission Reference : Z.N.(S.) 1242)

By **HENNING LEMCHE**

(*Universitetets Zoologiske Museum, Copenhagen*)

(*Note* :—Previous communications from Dr. Lemche on this subject have been included in the Agenda Paper as Document 25/8 published on pages 553 and 554 of the present volume.)

Since the proposal and consequent acceptance by the Congress in Copenhagen in 1953, of a Ruling that names of higher taxons shall be defined by the type method, I have given much thought to the problems involved, but it is not until now that I feel to have reached a suitable formulation of Rules to cover the case. To facilitate discussion on the Colloquium and Congress in London, I have added a diagram of a purely theoretical case which I think should prove useful. The main point is that different systems based on different characters must use different names for their groups if confusion is to be avoided, as explained in some detail below in advance to the proposals found at the end of this paper.

2. Within each taxonomic system, the principle of Priority works quite well. Increasing knowledge causes the removal of one family or another to some other order or class but, in terms of the diagram, the groups I, II, III, and IV remain unchanged in concept, although not in content. I suppose that the advocates of Priority in Class/Order Names think exclusively of such changes.

3. When, however, we turn to the other type of advance in systematics, matters are totally different. This happens when a new system is established on entirely new characters. Such revolutions in systematics are not too rare. The fishes are liable to still more of this sort, and even birds and mammals cannot be guaranteed against such happenings, not to speak of almost every invertebrate group. May I give briefly an example out of my own experience.

4. In 1925 Martynov (*Zs. Morph. Okol. Tiere* **4**) divided the winged insects (Pterygotes) into Palaeoptera (the Odonata and the Ephemeroptera) and Neoptera (all the other Pterygotes) because of differences in the wing structure. In 1940 Lemche (*Vid. Medd. Dansk Naturh. Foren.* **104**) proposed to divide the Pterygota into Plagioptera (Odonata and some extinct groups, only) characterised by their wings growing out in a lateral direction, and the Opisthoptera (all other Pterygota) their wings originating in a backwardly directed position. The Principle of Priority would require Lemche to adopt the names of Martynov. But how would it be possible for Lemche to persuade his colleagues to think that Neoptera Martynov *sensu* Lemche differ fundamentally from Neoptera Martynov *sensu* Martynov in being based on totally different characters ? Readers will turn to Martynov to see what is covered by the terms used. The Ephemeroptera which, under Martynov's definition, are agreed to belong to the Palaeoptera Martynov, will under Lemche's definition belong to the Neoptera Martynov *sensu* Lemche.

5. If, under the Priority system, an author was simply to state that the Ephemeroptera belongs to the Neoptera, it would be impossible to find out whether he is of the opinion that the Ephemeroptera possess the neala afforded by Martynov for the said group, or whether it possesses the backward-directed wing-pads as employed by Lemche in his later system. In the case of taxa of stable content, however, a similar statement would mean that the author in question adopted Martynov's system and that the Ephemeroptera had been proved to possess the neala characterising the Neoptera of Martynov—which is a clear-cut statement whether it is correct or not. If such an author were to use the character of the wing-pads, he would not employ Martynov's names but those of Lemche, simply stating that the Ephemeroptera because of their backward-directed wing-pads should be referred to the Opisthoptera and not to the Plagioptera.

6. In fact, the Principle of Priority binds a name to a certain and unchangeable concept defined by the type genus. This is what is wanted, too, in specific names, and what is tolerable on the generic level, also. On the family level difficulties are increasing, and many zoologists are, I am convinced, against the application of the Priority in that realm. But, at the Class/Order level this principle is entirely devastating. It is incomprehensible to me how it can be regarded as stabilisation to provide that progress in systematics shall be by putting changing concepts into stable names, thereby making these names indeterminate and useless. Instead, they should afford the same concept for the same name in all circumstances. A stable concept does not by necessity mean a stable content. The content might be changed if it became known that some part of the group covered by it did not conform to its definition, or if some other entities were to prove to conform to it. But it is my opinion that the purely theoretical Class/Order names should be stabilised in such a way that, when employed at all, each of them shall always cover one and the same concept.

7. On several occasions, I have chanced to be involved in problems of managing Class/Order Names, and in very different groups. The first time was (as mentioned above) in connection with insects, a group for a long time regarded by many scientists to be in the main classified according to a rather stable system, although specialists in several insect groups were aware of the underlying uncertainties. Second, I have met the problems in the Opisthobranchs, a group of molluscs still very far from having acquired a stable and suitable system. Recently, also, I became involved in the problems concerning the group-name Monoplacophora. The problem here was partly nomenclatorial, as it is at present provided that a group-name shall be dated from some author and shall be defined by type-principles which are forerunners of giving priority to such names. The problem is, however, also in part taxonomic and scientific, and the definition now given to that name will determine its later fate. If the present systematic ideas were to hold good, the name would stand, but if they were to be rejected at some future date, it would inevitably be necessary to reject the name too—by analogy with the case of the names in the insect system of Martynov and Lemche as discussed in paragraph 4 above.

8. Finally, I have now been confronted with the immense problem of re-grouping the fossil (and partly recent) groups including at least the Annelids, the Arthropods, and the Molluscs. On this re-organisation, the Principle of Priority will by necessity distract me from my purposes by imposing on me restriction after restriction in my thinking, as I am required to use old and unsuitable tools—viz., the existing names with their priorities—for a treatment where the first and all-important thing to do is to break away from all accepted dogmas in an attempt to reach a new and better systematic arrangement. If this does not have an impact upon taxonomic freedom and practice, I do not know what does.

9. It should be noted that almost all the foregoing discussion is concerned not with nomenclature as such, but with the disastrous consequences in the field of systematics of unhappy rulings on matters of nomenclature. I trust that the preceding paragraphs have shown that I have some experience in the field. Also, I have for many months given the most careful consideration to the problem involved, and I have discussed it with many colleagues. I feel bound, however, to say that the more I have penetrated into the whole topic, the more have I been convinced that the Congress made a serious mistake on the day in 1953 when it accepted the type method for the higher taxa and introduced mandatory *Official Lists* and *Official Indexes* for them.

10. There are a very few cases where the Commission could assist in these matters, viz., when two competing names have come to cover almost the same concept. A clear-cut example of this sort is the dualism between Lamellibranchs and Bivalves. In such a case, the Commission could recommend one of the names for acceptance and the other for rejection, but such action should be in the form of a recommendation only, to the effect that the accepted name should be used as long as taxonomic ideas remained unchanged, but that authors should still be free to introduce new systems with new names whenever they proposed new ideas of classification. In general, a name should live no longer than the system to which it belongs.

11. Another case for intervention by the Commission would be homonymy between names for different groups, e.g., the Decapoda in the Mollusca Cephalopoda, and in the Crustacea Malacostraca. Again, the Commission could recommend that the above word be used in one of the groups only, specifying a substitute name for the other—to be used as long as the accepted system remains unchanged.

12. To make a long story short, I am hereby proposing a totally new formulation of the Rules concerning names of taxons of higher value than the family-group level—here termed simply " names of higher taxa "—to be inserted in the Code to substitute as explained below for the proposals in the draft published in Volume 14 of the *Bulletin* :—

Reference to
Bradley Draft.

6/m (p. 51 line 22–26) To be deleted in its entirety.

8/1 (p. 70 line 2) Insert the words " of the family-group level or below " after the first word " taxon ".

12 (p. 92–94) The whole article to be redrawn as follows :

" NAMES OF HIGHER TAXONS

(1) Names of higher taxa shall not be subject to the Rules of Priority. They shall be regarded as purely theoretical concepts defined by the diagnostic characters in the taxonomic system employed.

Recommendation.

Where two names for higher taxa have developed so as to become virtually synonymous and competing within one and the same system of classification, the case may be brought before the Commission for their recommendation of a solution. The Commission's conclusion shall not, however, be binding for authors using other systems of classification than that on which the judgment was based ".

18/ (p. 117 line 15) The words " of a higher group " should be substituted by " of a family ".

18/2 (p. 117 line 28) The words " or higher " to be deleted.

18/3 (p. 118 line 2–15) The whole section to read :

" Names of higher taxa shall not be defined by the type method ".

24/5 (p. 173) Between lines 14 and 15 to be inserted :

" Changes in the diagnosis on transference to an emended system shall not be taken to create any case of homonymy ".

Line 15–17 to be substituted by :

" Recommendation.

Where homonymous names are in general use at the same time for two different higher taxa, the case of their homonymy should be placed before the Commission for consideration. Their conclusion in the case should be expressed as a decision to introduce the preferred name on an *Official List of Recommended Names of Higher Taxa in Zoology* and the name found less suitable on the corresponding *Official Index*."

29/e (p. 266) Lines 7–10 to be substituted by :

" (i) *Official List of Recommended Names for Higher Taxa in Zoology* " and the numbering of items iii–v to be changed accordingly (to ii–iv).

Line 14–17 to read :

" (v) *Official Index of Non-Recommended Names for Higher Taxa in Zoology* " and the numbering of items viii–xii to be changed accordingly (to vi–x).

(p. 267) Line 7–8 to be deleted.

Line 9, the words " through x " to be deleted.

HISTO
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The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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Volume 15, Double-Part 23/24 (pp. 741–808) *9th May* 1958

CASE No. 36

DRAFT "REGLES", ARTICLE 28 (GRAMMAR AND TYPOGRAPHY)

(Commission Reference : Z.N.(S.) 1332)

(For the relevant provision in the Draft of the Revised *Règles* see 1957, *Bull. zool. Nomencl.* **14** : 193 *et seq.*)

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20 MAY 1958

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DOCUMENT 36/1

Comments and Suggestions on Draft Article 28

By **CURTIS W. SABROSKY**

(*U.S. Department of Agriculture, Agricultural Research Service, Entomology Research Division, Washington, D.C., U.S.A.*)

(Enclosure to a letter dated 12th February 1958)

Point (1)

Article 28, Section 2(e) (: **197**) : The present wording applies only to the first example. In the second example, the apparent forename, in the combination Soos Arpad, is the actual surname and does not have to be "treated as though it were". Incidentally, the correct spelling is *Tansathit*, not Transahit. [See proposal to omit this whole paragraph, under the heading "Surnames vs. Personal Names".]

Point (2)

Article 28, Section 2(f) (: **198**) : I question that the Copenhagen Colloquium's misimpression of what was done at Paris justifies the tacit assumption that the Colloquium intended to make it mandatory. Perhaps, in the belief that it was decided at Paris, it was accepted in the absence of any real consideration. As indicated earlier in discussion of Article 24, Section 4(a), I would vote to have this confined to specific names, and might even question it there if different people were involved [*cf.* Article 24, Section 12(11)]. Certainly, in the light of past confusion as to what was done at Paris and Copenhagen, the provision and its possible effects should be scrutinized carefully. If this is not left as a mandatory provision, the Recommendation on p. 216, lines 14–19, could stand.

Point (3)

Article 28, Section 2(h) (: 199) : *Recommendations* 11 and 12 seem unnecessarily detailed for the Code. I favor omitting both. Ordinarily, authors will follow the name as it is customarily used, regardless of *Recommendation.* I would expect *vanderwulpi* oftener than *wulpi*, for example. And no great harm will be done by *saintclairi* instead of *clairi*, or *doamarali* instead of *amarali.*

Point (4)

Article 28, Section 3 (: 200) : This impresses me as being one facet of the Law of Priority, and not belonging in an Article on Grammar and Typography, in which the reader would expect to find directions on formation of names, suffixes, gender, etc. There are two possibilities : (1) that the Section be placed somewhere in Article 8, or (2) that it be worked into Article 11, Section 1, which is very close to being the same thing. If the latter is done, and perhaps even if it is not, the title of Article 11 should reflect the fact that it includes more than emendations, e.g., " The Status of Original Spellings, Emendations and Errors ", or " Status of Original and Erroneous Spellings and Emendations ", or " Original and Subsequent Spellings ". Incidentally, Article 28, Section 1(a) may also belong with Section 3, to be treated as above. Its " shall not be subject to change " is only a phase of maintaining the original spelling.

Point (5)

Article 28, Section 11(b) (: 209) : What about suffixes that do not in themselves show gender, such as the common " *-oides* " and " *-opsis* " (the latter in its adjectival use of " like ", and not the noun " *opsis* ", which is feminine) ? Dr. R. W. Brown, author of " Composition of Scientific Words " recommends that such derivatives take the gender of the noun with which they were combined, which would agree with the first part of paragraph (b). Because such names are common, it might be well to use some of them as Examples for this paragraph.

Point (6)

Article 28, Section 11(b) (: 209), Discussions on p. 209, lines 29 and 30 : It is stated here that there is no such masculine noun [as " *-stomus* "] in either

Greek or Latin. However, on p. 211, the Example lists *Cyclostomus* " used as a masculine noun ", in this case an adjective used as a noun (= " the round-mouthed one "). Perhaps this situation was what Copenhagen Decision 84(3) was intended to cover.

Point (7)

Article 28, Section 11(e) (: 213) : I propose that paragraph " (e) " be deleted. If classical usage clearly gives a certain gender for a certain ending, generic name, or type of name, let us have uniformity in zoology (and presumably, then, uniformity throughout biology) in the gender to be recognized for it. No serious harm will be done to usage. The form of the generic name will not be affected, and almost always only one or two letters at the end of the specific name. Subparagraph (ii) is particularly objectionable ; this provision, proposed here to form part of our basic Code, aids and abets confusion. It could mean varying usage for an ending like " *-rhynchus* " within the same animal group.

Point (8)

Article 28, Section 13(1) (: 221) : Dr. Yochelson has called my attention to the fact that, except possibly for this section, there is no clear statement anywhere in the Code that when a specific or infra-specific name is transferred from one genus to another, the ending of such name must be changed (if appropriate to do so) to agree in gender with the generic name with which it is newly combined. The words " with which it is at any time combined " imply the above, but it is a most obscure way to state this important fact. I suggest a distinct Section for it. It might also be noted in Article 11, Section 1(a).

Point (9)

Article 28, Section 13 (: 221) : Should some note be made of the occasional specific names compounded of a noun as first part and an adjective as second part, with the adjectival ending dependent on the gender of the noun with which it is combined and not on the generic name ? Examples : *Melanoplus femurrubrum*, a grasshopper ; *Desmometopa M-nigrum*, a fly. In the first binomen, the generic name is masculine ; in the second, feminine. Both specific names show a neuter ending (" *-um* ") because the nouns with which they are combined are neuter.

Point (10)

Article 28, Section 16(c) (: 225) : I am not sure that dropping the final vowel is wise, even if made merely permissive. The old Code (Article 14) stated that the " genitive is always formed by adding, to the exact and complete name . . . an *ae* if the person is a woman ". This had the advantage of simplicity and uniform treatment, and it preserved clearly the basis of the name. The name " *gurae* " is not as clear as " *guriae* ", from the name Guri. Various pairs of women's names would result in the same spelling, under the present version : Names dedicated to Maria and Marie would yield *mariae* ; to Loa and Lou, *loae* ; to Ann and Anna, *annae*.

Surnames *vs*. Personal Names : In a number of places in Article 28, " surname " is used, but I believe that the provisions should be broadened to apply also to forenames. All relevant provisions (except 16(d)) can and should apply to both kinds of names. I propose therefore, for all cases except one where " surname " is used in Article 28, that either " personal name " or " name " (whichever is appropriate) be substituted. " Surname " is properly used in Section 16(d) (composed only of *Recommendation* 25). The following uses are involved (suggested substitute given, plus any comments in brackets) :

Point (11)

" Recommendation " 6 (: 195) : For " surnames ", read " personal names ". [Undoubtedly usually surnames, but restriction not really necessary.]

Point (12)

" Recommendation " 7 (: 196) : For " surnames " and " surname ", read " personal names " and " personal name ". [Why differentiate between *Eugrimmia* and *Euhelena*, for example ?]

Point (13)

Section 2(c) (: 196) : For " surname ", read " personal name ". [Names compounded with " Saint " are occasionally used as forenames.]

Point (14)

" Recommendation " 8 (: 196) : For " surname " read " name ".

Point (15)

Section 2(e) (: 197) : This paragraph can be omitted entirely, if we do not differentiate between surnames and forenames. If I named a species after my friend, Dr. Arpad Soos, I should be free to choose either *arpadi* or *soosi*.

Point (16)

" Recommendation " 10 (: 197) : The bracketed sentence can be omitted (lines 24–25).

Point (17)

" Recommendation " 12(α) (: 199) : Examples : Omit " surnames ", end of line 3.

Point (18)

" Recommendation " 22 (: 216) : For " surname [or forename] " read " personal name ".

Point (19)

Unnumbered " Recommendation " (: 216, lines 14 ff.) : Dr. Bradley has proposed that this be omitted, but its fate will be determined by decisions on Section 2(f) and (h). If retained, change the title (line 14) from " Surnames " to " Personal Names ", and change " surname " to " personal name " in each of lines 26 and 30.

Point (20)

Section 16 (: 223, line 2) : For " Surname " read " personal name ". [The use of surname here was applied to the whole section, but some examples were of personal names (e.g., p. 226, lines 5 and 13)].

Point (21)

Section 16(a) (: 223) : [Example of adjective formed from a forename : *Erioptera mabelana* Alexander (a tipulid fly, named after Mrs. Alexander)].

Point (22)

Section 16(b) (i) (: 223) : For " surname ", read " name ". [Example, based on a forename : *Wyeomyia alani* Lane & Cerqueira (a mosquito, named after Alan Stone)].

Point (23)

Section 16(b)(iii) (: 224) : For " surname ", read " name ".

Point (24)

Section 16(b)(iv) (: 225) : For " surname ", read " name ". [Possibly the names coming under this provision are, for the most part, surnames, but certainly there are some classical names used occasionally as modern fore names, e.g., Claudius and Cassius. Incidentally, *möbiusi* was used as an example in Article 14 of the old Code. Does it come under this provision or under 16(b) ? How does one tell without a lot of useless bibliographical research ? Do modern Scandinavian names ending in -ius all come here ? If *mobiusi* does fall under this provision, it would mean that we should have to correct (under 16(f)) an example from the old code. I wonder if this provision should be mandatory or should really only be a *Recommendation.* Are we being too pedantic ?]

16(d) and " Recommendation " 25 : Surname is properly used in this part, because the reference is to a specific usage for Linnaeus, Fabricius and Poda.

16(e) : For " surnames " read " personal names ". [There have been a number of examples of forenames used without the genitive ending, such as *elizabeth*].

Contraventions

Paragraphs or statements regarding contravention of the mandatory provisions of this Article appear in ten different places in the Article, in Sections 2(i), 4(a)(i), 6, 9(c), 10(a), 13(b), 14, 15(b), 16(f), and 17(a). I have analyzed all of those, the Sections to which they refer, and the Sections for which no such statements appear. I believe that the Article could be shortened considerably, much repetition avoided, and simplicity gained by combining all of them into a single provision, to be the very first provision in Section 1 of the Article. The following is suggested :

> Section 1. Name-formation in general.
>
> [(a) Contraventions.—A name established in contravention of any of the mandatory provisions of this Article must be corrected, but attributed to its original author and date (*cf.* Article 11).]

Contrary to the usual plan, I would place this first under the general rules, to catch the eye immediately, and also put a similar provision in Article 11.

The ten separate paragraphs on " Contraventions " have different wordings, and it is not evident why that should be. Even if the above proposal be rejected, I believe some uniformity of wording would be desirable. Four Sections of Article 28 (13(b), 14, 15(b), 16(f)) say " must be corrected " [= compulsion, Introduction, p. 31] ; two Sections say " when noted ", and two " when noticed ", but this difference is unimportant. Three Sections (6, 9(c), 10(a)) say " shall be corrected " [= mandatory]. One (4(a)(i)) says " shall be . . . automatically corrected " [= mandatory, automatic ?]. Two Sections (2(i), 17(a)) say " shall be subject to correction " [= mandatory ? Or does the wording imply that they might be left uncorrected ?]. There really seems to be little fundamental difference between a change from *terrae-novae* to *terraenovae* (Article 28, Section 15(b) : " must be corrected "), *mcclayi* to *macclayi* (Article 28, Section 2(i) : " shall be subject to correction "), and *Tabani* to *Tabanus* (Article 28, Section 10(a) : " shall be corrected "). The last named example should certainly fall in the " must be corrected " category ; a generic name cannot be in the plural. To conclude : If mandatory provisions are contravened, should not all corrections be a " must " (i.e., compulsion) ?

In two instances (Sections 10(a), 13(b)) it is specified that the corrected name shall be attributed to the original author and date. Should not all corrections be treated thus ? Indeed, since these corrections are valid emendations (Article 11, Section 1(c)), they all do take the original date and authorship (Article 11, Section 4(b)).

An important question remains : What effect would making this provision all-inclusive have on the Sections where there are at present no items on " Contraventions " ? These are analyzed as follows (*Recommendations*, not being mandatory, are ignored) :

Point (25)

Article 28, Section 1 (: 193) : 1(a) is a " not subject to change " provision.

Point (26)

Article 28, Section 3 (: 200) : It is proposed (*cf.* elsewhere) that this section be to either Article 8 or 11, preferably to a revised or at least re-titled version of the latter.

Point (27)

Article 28, Section 5 (: 202) : Only contains *Recommendations.*

Point (28)

Article 28, Sections 7 and 8 (: 203) : Correction would work alright with the proviso of course that corrections in Section 8 would not extend to all the old names in the history of family-group names (formed with " *-acea* ", " *-ina* ", " *-ides* ", etc.) unless and until they were brought into present day use.

Point (29)

Article 28, Section 11 (: 208) : The wording is now mandatory, in most paragraphs. If this is meant to be retroactive, and I assume it is (*cf.* Article 11, Section 1(d)), required correction would be proper.

Point (30)

Article 28, Section 12 (: 215) : 12(b) is only informative. 12(a) says that certain words are " invalid " as names (should it have said " unavailable " ?). The reference is to Article 6, on Availability ; incidentally, it should be Article 6, Section 1(c), not Section 1(d). If Section 12(a) means invalid but available, then there should be provision for correction ; if it really means unavailable, should it not be changed to provide for availability, and correction ? Example : *Muscina* and *Potamida* are good generic names ; if they had first appeared in plural form, they would have been *Muscinae* and *Potamidae*. Would not these names be available, but to be corrected, under Article 28, Section 10(a) ? If it was the intent here in Section 12 (and in Article 6, Section 1(c)) to rule such names as unavailable, I raise the question whether this should be reconsidered, and such names be considered correctable under Article 28, Section 10(a).

Point (31)

Article 28, Section 18 (: 229) : Contains only prohibitions.

Conclusion : The proposed substitute for Section 1(a) will not adversely affect any of these sections. On this point, then, there would be no difficulty in making one general paragraph for " Contraventions ", to apply to the entire Article 28.

CASE No. 37

DRAFT " REGLES ", ARTICLE 22, SECTION 5 (CITATION OF THE NAMES OF AUTHORS, OTHER THAN ORIGINAL AUTHORS)

(Commission Reference : Z.N.(S.) 1331)

DOCUMENT 37/1

Mode of citation to be adopted for citing an author's name subsequent to the original proposal of a zoological name

By **MYRA KEEN**

(*Stanford University, School of Mineral Sciences, Stanford, California, U.S.A.*)

(Enclosure to a letter dated 10th March 1958)

In the *Journal of Paleontology* for May 1957 (Vol. 31, no. 3, p. 672), the editors, Erwin C. Stumm and Robert V. Kesling, under the title " Citations and references in the Journal of Paleontology " give the following as a recommended form for synonymies :

Beyrichia sussexensis Weller, 1903, p. 253, pl. 23, figs. 3, 4.

Beyrichia perinflata Weller, 1903, p. 254, pl. 23, fig. 6.

Kloedenia sussexensis Ulrich & Bassler, 1908, p. 302, pl. 38, figs. 19, 20. Bassler & Kellett, 1934, p. 366. Swartz & Whitmore, 1956, p. 1064–1065, pl. 106, figs. 7–12.

2. As I interpret it, this falls into the pattern of synonymy cited by Schenck and McMasters in *Procedure in Taxonomy* as undesirable ; for example,

their example no. 1 on page 22 of either the revised edition (1948) or the third edition (1956):

> *Ellipsonodosaria verneuili* (d'Orbigny)
>
> *Dentalina verneuili* d'Orbigny, Foram. Foss. Bass. Tert. Vienne, 1846, p. 48, pl. 2, figs. 7, 8.
>
> *Nodosaria verneuili* Nuttall, Quart, Jour. Geol. Soc., vol. 84, p. 81, pl. 4, figs. 14, 15.

3. I am informed by zoologists that the practice of citing the names of subsequent authors' names—in connection, especially, with the name of a species—without the repetition of the name of the original author, is not only common but is accepted practice in many fields of zoology. The excuse seems to be that it is time-saving and also economical, by avoiding additional printing costs. This would seem to be poor economy, for what may be saved initially is negligible in comparison to the time and effort that must be expended by later workers in determining whether each such reference was an original proposal of a name or merely a subsequent citation.

4. The new draft text of the Code carries what appears to be an implicit solution of the problem, needing only the explicit statement of a corollary to one of the present sections, Article 22, Section 5(a) [page 161], which now reads as follows:

> The name of the author, when cited, shall follow the name of the taxon without interposition of any marks of punctuation.

5. I should like to suggest that a subsection 5(a)(i) should be added:

> The name of the taxon, when cited in connection with the name of any other or subsequent author, should be separated from that author's name by some mark of punctuation or otherwise.

6. This would permit workers who do not wish to keep repeating in a long synonymy the name of the original author to replace it by a punctuation mark of some sort. I had suggested a comma or a period, but Dr. Curtis Sabrosky, with whom I have discussed the problem, feels that a semicolon or a colon would be preferable, as being easier to detect when reading proof. In any case, this seems an opportunity for discouraging an apparently growing tendency among some systematists to take a short-cut that leads to ambiguity.

DOCUMENT 37/2

Proposal for the insertion in the " Règles " of a provision prescribing a method for distinguishing the name of a later user of a zoological name from the name of the original author of that zoological name

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 13th March 1958)

Dr. Myra Keen and Dr. Curtis Sabrosky have raised the question whether there should be inserted in the *Règles* a provision prescribing a method for distinguishing the name of a later user of a zoological name from the name of the original author of that zoological name.

2. I wish strongly to support the condemnation expressed by Dr. Keen of the practice of placing after a specific name without comment the name not of the original author of that specific name but the name of some later user of that name. This practice is not only incorrect but is in addition highly misleading. For example, there is, in my opinion, nothing whatever to be said in favour of such an entry as *A-us b-us* Smith, 1900, which implies that this binomen was published as the name for a new nominal taxon by Smith in 1900, when in fact the name was first published by (say) Brown in 1850, the name as employed by Smith in 1900 being no more than a later usage by Smith of the name published by Brown fifty years earlier. Fortunately, this type of citation, though formerly very common and in some groups at least almost universal is now much rarer, though even now it persists here and there and gives rise to unnecessary confusion.

3. While it would today be difficult to find many who would be prepared to defend the obsolete and objectionable method of citation discussed above, it seems desirable nevertheless that words should be inserted in the *Règles* which would have the effect of rendering this method of citation definitely incorrect. It appears to me that the logical course would be to treat this matter in two stages. The first would consist of a mandatory provision under which the above method of citation would be declared to be incorrect. The second which would be non-mandatory would take the form of a *Recommandation* which would give guidance as to a method of citation which would be regarded as being acceptable.

4. The mandatory provision I suggest should take the form of an addition to Section 5(a) of Article 22 of the Draft *Règles* (1957, *Bull. zool. Nomencl.* **14** : 161). Under this suggestion the existing Section 5(a) would become 5(a)(i), the new provision becoming 5(a)(ii). The provision which I would like to suggest for consideration would read as follows : " The name of a later user of a zoological name is not to be cited immediately after that zoological name without some indication that the author in question was not the original author of the name ".

5. If the foregoing proposal finds favour, it will be necessary to consider what would be the most appropriate method to be adopted for the purpose of giving the indication referred to above. Of the suggestions put forward in Dr. Myra Keen's letter of 10th March 1958 (Document 37/1), my feeling is that a colon would be greatly preferable to a semicolon, both because it is more distinctive and more readily legible and because a semicolon might easily be misread for a comma. The last-mentioned mark of punctuation would, I consider, be most undesirable in view of the fact that formerly most, and even now some, zoologists place a comma between a specific name and the author's name, notwithstanding the fact that this is not in accordance with the provisions of the existing *Règles*. The use of a comma for the special purpose now under consideration would be likely to create confusion and to defeat the purpose of the proposed new provision.

6. For the reasons explained above I favour the adoption of the colon as the symbol to be recommended for the present purpose. I think it very important, however, that the wording to be employed should not be such as to rule out a more self-explanatory and more readily intelligible formula in cases where the author considers this necessary for the sake of clarity, e.g., the use of the formula " *A-us b-us* Brown, Smith, 1900, *nec* Brown, 1850 " which is the only formula which gives all the information which may be required in such cases. I accordingly suggest that the proposed *Recommandation* be on the following lines : " Where it is desired to cite in connection with a zoological name the name of some author other than the original author, this may be done by citing the name of the later author immediately after the zoological name concerned but separated from it by a colon, in those cases where it is not considered necessary to cite also the name of the original author of the zoological name in question ; where, however, it is desired to cite the original author's name, that name should precede the name of the author of the later usage and be separated therefrom by a comma ".

CASE No. 38

DRAFT " REGLES " : PROPOSED DISCONTINUANCE OF THE USE OF THE EXPRESSION " TRANSLITERATION "

(Commission Reference : Z.N.(S.) 1334)

DOCUMENT 38/1

Draft " Règles ", proposed substitution of the word " Latinisation " for the word " transliteration "

By **L. W. GRENSTED**

(*Consulting Classical Adviser to the International Commission on Zoological Nomenclature*)

(Letter dated the 2nd March 1958)

I think that a great deal of the trouble which we are having in regard to the wording of various parts of the draft of the revised English text of the *Règles* is due to confusion between the concept " transliteration " and the concept " Latinisation ". This confusion no doubt arises from the misuse of the word " transliteration " in Section F of the *Appendice* (Appendix) to the existing *Règles*. The table there given is one for the Latinisation of Greek words and not for their transliteration.

2. The confusion of thought so involved is at present obscuring the whole discussion, for example, that in connection with words having the terminations " *-cheilus* " and " *-rhamphus* ". Professor Chester Bradley is, I think, on the right lines in his discussion of the grammatical formation of family-group names in his paper Document 20/1 (1958, *Bull. zool. Nomencl.* **15** : 331–333). I consider, however, that Section F of the *Appendice* ought to be reconsidered

at least to the extent of substituting the word "Latinisation" for the misleading word "transliteration".

3. My proposal is that the word "Latinisation" be substituted for the word "transliteration" in the main body of the *Règles*, wherever the context so requires. As regards Section F of the *Appendice*, the change recommended may involve some minor alterations and perhaps some additions. Any necessary proposals under this head will be submitted later.

CASE No. 39

DRAFT "REGLES", ARTICLE 22, SECTION 1(c) AND 1(d): CITATION OF NAMES PUBLISHED BY TWO OR MORE AUTHORS

(Commission Reference : Z.N.(S.) 1335)

DOCUMENT 39/1

Proposal for the amendment of Section 1(c) and 1(d) of Article 22 of the Draft "Règles"

By **G. H. E. HOPKINS**

(*British Museum* (*Natural History*), *The Zoological Museum, Tring, Herts, England*)

(Statement received on 25th February 1958)

Article 22 Section 1(c) of the Draft *Règles* seems to me to be unworkable and not wholly in accordance with the Paris resolution on which it is based. The reference to this latter is given as *Bull. zool. Nomencl.* **4** : 565, but the relevant subparagraph is on p. 566 and reads as follows :—

> (b) Where in a book or paper written by one author (say author " A ") it is clearly stated that the description of one or more specified taxonomic units there named has been prepared exclusively by some other author (say author " C "), the name or names in question are to be attributed to author " C ", not to author " A ". The name of a taxonomic unit so described and named is to be cited by later authors as having been published by " C " *in* " A ".

2. The relevant subparagraph of the Draft *Règles* differs essentially from the Paris resolution by the omission of the word " exclusively ", and this, to my mind, renders it unworkable. Let us consider some hypothetical instances, all of which would be readily converted by examination of the literature into genuine ones :—

(i) " A " asks " C " to compare specimens of a supposed new species with the holotype of its nearest described relative. " C " replies, pointing out certain differences and sending " A " paratypes from which " A " is able to find many more differences. "A" gives proper acknowledgment for " C " 's help but himself provides the name and most of the description.

(ii) " C " provides " A " with a complete description which " A " uses and acknowledges, but " A " provides the name and calls the new species " *C. . . ai c. . .i* " in recognition of " C " 's help.

(iii) " C " has provided the description but has told "A" not to trouble to acknowledge his help and " A " therefore makes no reference to it.

(iv) " A " states that the description has been provided by " C ", but actually it has not, since " A " has completely reworded it and distorted it to such a degree that it is no longer recognizable as " C " 's work.

(v) Author " A " considers that the differences between an undescribed species and its nearest described relative are best shown by illustrations. He therefore employs a professional artist or photographer to provide illustrations and contents himself with some such statement as " The differences between *X. . .us y. . .i* and its nearest known relative are better shown by contrasting Fig. 1 with Fig. 2 than by any verbal description ".

3. The first point to be noted is that, as the clause stands in the Draft *Règles*, it would be quite impossible to decide at what point the authorship passes from " A " to " C ", since the latter's help may range through all degrees from a casual remark that in the genus concerned certain specified structures provide the best characters, through notes of all grades of completeness as to what the differences are, to a full description which " A " may or may not paraphrase. The question of authorship would depend almost wholly on the generosity of "A" 's acknowledgment; the more generous this is, the more probable it becomes that " A " will forfeit the authorship of the name he is proposing. We must all agree with the statement in the Foreword to Article 22 (*Bull. zool. Nomencl.* **14** : 156) that no particular credit should attach to the authorship of a name, but none of us would desire to penalize generosity in acknowledging (or even over-acknowledging) help. It seems to me essential that, for the clause to be workable, the word " exclusively " must be restored, as in the Paris resolution.

4. But would even this change, which would bring the clause into conformity with the Paris resolution, make it workable and desirable ? In my hypothetical case (ii) the authorship would still have to be attributed to " C ", who would be put in the invidious position of having named a genus and species after himself, while in case (iv) there could be endless arguments as to whether the degree of paraphrasing is sufficient to make the description not exclusively "C"'s. In example (v) it is beyond all doubt that the indication was exclusively provided by someone other than the author of the name, but it would be a startling innovation to transfer the authorship from the latter to the artist or photographer (the former often anonymous and the latter generally so), no matter how much they may deserve it. I agree with the Foreword in considering that the main object of authorship is to form an abbreviated literature-reference, but the name of the artist or photographer would certainly not help this object. But throughout Section 1(c) the emphasis is entirely on the apportionment of the supposed credit derived from authorship of new names rather than on the usefulness of the author's name and date of publication as an abbreviated bibliographical reference. This (for which the responsibility lies with the Paris Congress, not with the drafter) is entirely contrary to the spirit of the Foreword.

5. Moreover, it seems to have been overlooked that the effect of Section 1(c) would, even if the word "exclusively" be restored, be to change the accepted authorship of a large number of names, and that there is a serious inconsistency in principle between Section 1(c) and 1(e). Under Article 25 of the old Rules (*Proc. biol. Soc. Wash.* **39** : 81) authorship was not dealt with, but it is customary (at least in the groups with which I am concerned) to attribute the authorship of substitute names to the author who first published them ; this principle is followed in subparagraph 1(e). But if we apply Section 1(c), either as contained in the Paris resolution or in the draft Article 22, we are faced with the absurdity that if the original author gave a taxon an appellation not in accordance with Article 6 Section 1 of the Draft *Règles* (see *Bull. zool. Nomencl.* **14** : 49), if, for instance, he used for it a single letter or number or a name which is a primary homonym, the authorship of the available name subsequently applied to it is to be attrituted to the author who published it (Article 22, Section 1(e)), whereas if the earlier author gave the taxon no name or appellation at all, he is deemed to be the author of the replacement-name, regardless of the facts that he never heard of it and that his name is not to be found as its author in the work in which it was published (contrast the Foreword of the Draft of Article 22, especially the second sentence). Much more serious, because applying to a much larger number of names, is the inconsistency between the treatment to be accorded, under Section 1 of Article 22, to substitute-names for primary homonyms and secondary homonyms. Since primary homonyms were unavailable at the time they were published substitute-names for them come under the provisions of Section 1(e) and are to be attributed to the author who first published them. But secondary homonyms were available at the time they were published and therefore replacement-names for them come under Section 1(c) ; unless their proposer has gone to the often unnecessary and sometimes even undesirable (*cf.* Article 19, Section 4(b) of the Draft *Règles*, *Bull. zool. Nomencl.* **14** : 127) task of redescribing the taxon, these names must be attributed to the author of the homonym.

6. I therefore propose the following amendments to Section 1 of Article 22 of the Draft *Règles* :—

(1) That subparagraph (c) be rejected and be replaced by the following :—

> (c) **Contributors.** If it is clearly indicated in the work in which a name was first validly published that the name and the description, definition or indication which serves to validate it were prepared exclusively by some one other than the author of the work, that name shall be attributed to the author who contributed the name and its description, definition or indication, not to the author of the work.

7. If the above amendment should be approved, the second portion of Section 1(d) (the first seven lines on p. 158 of the Draft *Règles*) becomes redundant and should be deleted. If the amendment should be rejected, or only approved so far as concerns the restoration of the word " exclusively ", I propose :—

(2) That the second portion of Section 1(d), comprising the first seven lines on p. 158 of the Draft Rules, should be amended to read as follows :—

> But if the author who first published it as a *nomen nudum*, or an author who had used it in manuscript, was exclusively responsible for the description, definition or indication which gave it validity, and that fact is made clear therein, then the authorship of the name shall be attributed to the said author.

DOCUMENT 1/58

(*continued from page* 728)

Comment on the Moore/Sylvester-Bradley " Parataxa " Plan

(Commission Reference : Z.N.(S.) 1056)

By **PRESTON E. CLOUD, Jr.**

(*U.S. Geological Survey, Washington, D.C., U.S.A.*)

(Letter dated 25th February 1958)

Although I am not unfamiliar with the problems of nomenclature for parts of organisms and the distinctive works of organisms I find no relief for these problems in the proposals made. In my view, therefore, these proposals are not appropriate for the paleontological needs they purport to serve. We will always be faced with the problem of naming distinctive objects or marks of unknown or doubtful affinity in paleontology and I feel that on the whole we are best left to work out this in the most practicable way available at the time. The confusion inherent in the disaggreation of organisms cannot be legislated away, and to appear to do so would remove one of the strongest incentives toward the restoration of natural relations.

I can visualize no safeguards that will render the scheme innocuous from the viewpoint of whole-animal nomenclature. The scheme proposed is really a new system of nomenclature and once the " parataxonomists " are given the proposed charter they will probably ignore whole-animal taxonomy.

DOCUMENT 1/59

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "

(Commission Reference : Z.N.(S.) 1056)

By **CARL C. BRANSON**
(*Oklahoma Geological Survey, Norman, Oklahoma, U.S.A.*)

(Enclosure to letter dated 6th March 1958)

There is no present need for recognition of conodont parataxa. The current system of recognition of genera and species subject to the *Règles* works well. The belief of a few workers, first, that they have recognized assemblages, second, that these assemblages represent unit apparatus (certainly not whole animals) is doubted by myself and other experts. Much evidence indicates that the " assemblages " are change coprolite associations.

2. The names of " assemblages ", said to be natural genera, should be suppressed as unnecessary, premature, and hypothetical. The names are *Duboisella* Rhodes, *Illinella* Rhodes, *Lochriea* Scott, *Lewistonella* Scott, *Scottognathus* Rhodes, *Westfalicus* Schmidt.

3. The names of conodont genera should be left as names of true taxa until such time as it is scientifically demonstrated (if it is) that these genera occur in association ; at which time, the Law of Priority should be strictly applied to conserve the first name as that of the whole animal genus.

4. Recognition of parataxa should (if given at all) be confined to names in groups where such are clearly (and, it is hoped, temporarily) needed. These groups would seem to be aptychi, otoliths, sponge and holothurian spicules. No parataxial names are needed for pelinatozoan stem ossicles, for vertebrate partial skeletons, for scolecodonts, for bradyodonti and their relatives, or for

Ceratopea. The true status of the generic names used is recognized by all and the nomenclature is revised according to the rules when material is found that clarifies the morphological association.

5. The recognition of names of parataxa as names separate from those of taxa is opposed, strongly so for conodonts. The need is for strict application of the rules in recognition of the fact that zoological nomenclature is being built for the centuries and millenia of the future. Mere inconvenience of this generation of zoologists is not a valid reason for wholesale relaxation of rules nor for recognition of numerous exceptions to the rules.

DOCUMENT 2/20

(*continued from page* 352)

Proposed maintenance of Copenhagen Decision 54(1)(a)

(Commission Reference : Z.N.(S.) 835)

By **JEAN L. LAFFOON**

(*Iowa State College, Ames, Iowa, U.S.A.*)

(Enclosure to letter dated 4th March 1958)

Documents already published in regard to Case 2 on the London Congress Agenda indicate dissatisfaction with Copenhagen Decision 54(1)(a) on two grounds : (1) An interpretation that the decision is retroactive and therefore would require revival of certain names long carried as junior synonyms of family-group names ; (2) The requirement of the decision that in certain cases family-group names be used even though their stems are those of generic names considered to be junior synonyms.

The Commission could easily remove the first objection by a clear statement that the decision is not retroactive and will apply only after a stated date. The importance of the second objection must be weighed against the desirability of incorporating into the Rules a feature which would prevent most future changing of family-group names. If it is insisted that family-group names must be changed whenever names of their type-genera become junior synonyms, then we must resign ourselves to numerous future changes in family-group names (or hosts of appeals to the Commission to avoid the changes). If Decision 54(1)(a) is allowed to stand, there will be far fewer future changes, but we will have some family-group names based on generic names which are junior synonyms. I strongly prefer the latter course.

DOCUMENT 13/6

(*continued from page* 354)

Support for the proposal that partially Latinised words should be treated as barbarous words and therefore exempt from change in gender

(Commission Reference : Z.N.(S.) 1064)

By **G. H. E. HOPKINS**

(*British Museum (Natural History), The Zoological Museum, Tring, Herts, England*)

(Enclosure to a letter dated 19th February 1958)

I wish to support strongly Mr. Hemming's suggestion that partially Latinised specific names in adjectival form should be exempt from changes in gender ; my support extends to any other proposals directed to simplifying the Rules in this respect. Now that so many zoologists know (like Shakespeare) " little Latin and less Greek " it seems to me to be questionable whether we should attempt to keep up the pretence that the language we use in zoology is Latin in any true sense or to try to apply Latin rules of grammar to it, and to be beyond doubt that if we are to continue to do this we must simplify the application of these rules by every possible means which will not give really serious offence to classicists. For this reason such suggestions as (Draft *Règles* Article 28, Section 11(d) second example, *Bull. zool. Nomencl.* **14** : 211) that a particular sort of name " may be more nicely treated " in a particular way than in another (presumably in supposed accordance with classical usage) or (*Bull. zool. Nomencl.* **15**: 271, line 18) that " several specialists of mediaeval Latin " need to be consulted on a nomenclatorial point fill me with dismay.

The sole purpose of Rules of Zoological Nomenclature is to ensure that, subject to inevitable taxonomical differences of opinion, we should all use the same name for the same animal. The use of correct forms in Greek or Latin (whether classical or mediaeval) is utterly outside the purpose of the Rules unless incorrect forms would be so offensive to the minority of zoologists who are also classicists as to tempt them to use classically correct but zoologically incorrect alternatives.

DOCUMENT 33/2

(*continued from page* 694)

Miscellaneous Comments on the Draft of the " Règles "

(Commission Reference : Z.N.(S.) 1329)

By **CURTIS W. SABROSKY**

(*U.S. Department of Agriculture, Agricultural Research Service, Entomology Research Division, Washington, D.C., U.S.A.*)

(Enclosure to a letter dated 12th February 1958)

In the following comments, words or phrases suggested as replacements are underlined ; suggested additions are in brackets. Proposed omissions will be so stated, or will be obvious in the short quotations given.

The number of comments should not be interpreted as dissatisfaction. I feel that the Draft is a remarkably well done job on an exceptionally difficult task. But the ramifications seem endless, and need the utmost in attentions and testing in this formative stage.

Point (1)

Article 4, Section 2 (: 40) : I suggest that the "Explanation" be incorporated in the Section as follows : " The designation of a species shall be binominal [, consisting of its uninominal specific name preceded by the name of the genus to which it is attached, the two forming a binomen. Citation of a subgeneric name is an optional matter, and is parenthetical, not affecting the binomen (or the trinomen in Section 3) in any way.] ".

Point (2)

Article 6, Section 3(3) (: 53) : I dislike the extension of the meaning of " indication " to cover these names. Indication, as defined in *Opinion* 1, was concerned with method of publication, not with what was being named. I believe, however, that we must follow long and customary usage and accept names founded on the work of animals, but I think it should be a provision of Section 1, without recourse to calling the description an indication. It is appropriate here to refer also to Article 8, Section 2(b)(6) and Bradley's discussion. The Paris action was probably an oversight; it is not clear that they intended to throw out such names proposed after 1930, and indeed their adoption of a *Recommandation* against the practice suggests otherwise. However, by construing a description of the work of an animal as an "indication", they trapped themselves. I believe, therefore, that in Article 8, Section 2(b)(6) on p. 72, line 26, the words "prior to 1931" should be eliminated, and Bradley's proposed *Recommendation* be adopted.

Point (3)

Article 6, Section 6(a) (: 57): Under "Extranomenclatural names", was it the intent to include names which clearly apply to zoological taxa, but which the author stated were not so proposed? I was under the impression that the passage was intended for hypothetical names ("Pithecanthropus" Haeckel, 1866, and the "Quisnam sexcaudatus" referred to in the Draft. But it does include names such as the following: "*T*[*ipula*] *angelica* spec. nov. Mannheims in litt.", "*T. engeli* spec. nov. Theowald in litt.", and other similar names published by Theowald (1957) with description and figures but with the note: "Es ist nicht meine Absicht mit dieser Beschreibung der Puppe den Namen *angelica* [or engeli, or etc.] für den Gebrauch in der zoologischen Nomenklatur festzulegen (vgl.: Copenhagen Decisions on Zoological Nomenclature, art. 114, 1)?"

Point (4)

Article 6, Section 7(a) (: 58): As worded here, this would mean that a generic name published in a specific synonymy, as part of a binomen, the second part being either an already established species or one validated in the synonymy by independent data, would be available. Was this intended? If left as it stands, it would mean that some generic names first cited in specific synonymies would be available, and others not.

Point (5)

Article 6, Section 7(a) (: 58, lines 17–19): ("data required to give it availability under the provisions of Section 1 for names of its date"). This Section appears to be a case of circular reasoning with no end-point to give the taxonomist a final answer. The wording refers us back to the provisions of Section 1. In that Section, paragraphs "a" through "h" will ordinarily be satisfied and paragraphs "j" and "k" will not apply. That leaves paragraph " i " for names prior to 1931. Under this paragraph, names are available if accompanied by an indication, and we are referred to Section 3. Of the eight parts of Section 3, the only relevant one is number (5) : Citation in synonymy. But, for " the conditions under which the first publication of a name only in a synonymy constitutes an ' indication ', *cf.* Section 7 ". And back we are at Section 7, without ever having found out what are the data required to give it availability.

Point (6)

Article 6, Section 9(d) (: 63) : Suggested rewording, for brevity ; " If an author spells out in Latin a Greek or barbarous letter or cardinal numeral intended to be the name of a taxon, he thereby makes that name available, other requirements having been met ".

Point (7)

Article 7, Section 2(a)(i) (: 64) : I assume that this includes mimeographing. Dr. Rehder has suggested that the status of mimeographed work should be made clear, because it is a question so often raised. *Recommendation* 2 certainly implies validity for documents reproduced by some means other than printing presses.

Point (8)

Article 7, Section 4(1) (: 66) : What of such practises as the Smithsonian Institution's deposit of its publications in public and institutional libraries, or journals such as the *Transactions of the American Entomological Society* which send to a specified list of libraries in order to establish date of publication ?

Point (9)

Article 8, Section 2(b)(6) (: 72) : See previous discussion under Article 6, Section 3 (3) (Point 2).

Point (10)

Article 10, " Recommendation " 5 (: 79) : The method of signalizing involves differences in taste, habit, and editorial practice, the latter usually beyond control of the taxonomist. Let us not be too specific. I would omit reference to a comma, and would not specify an abbreviation. Suggestion : " He should clearly indicate that the name of the taxon is new, either by words or by an appropriate abbreviation, such as " new genus ", " sp. n.", etc.".

Point (11)

Article 10, " Recommendation " 6 (: 79), second paragraph, lines 26–28) : Why not transfer this to Article 15, *Recommendation* 1, where it properly belongs, and set up the statement there in the same form as in Rec. 6, first paragraph ? See comment below on Article 15, *Recommendation* 1.

Point (12)

Article 10, " Recommendation " 8 (: 80) : Is this *Recommendation* necessary in the new Code ? After 1930, a diagnosis is required for a new taxon [cf. Article 6, Section 1(j)].

Point (13)

Article 13 (: 95) : Family-group names as we know them today were first used under a variety of categories and suffixes, and not always as what we would call a family-group today. For example, the earliest use of a family ENDOCERATIDAE in paleozoology was apparently as an order, called Endoceratoidea. It might be well to insert, perhaps as a new paragraph in Section 3, a provision like the following : " [Eligibility for the family-group.—Use of the basic stem of an included generic name in forming the name of a supra-generic taxon shall be construed as *ipso facto* giving the latter name availability and priority in the family-group, regardless of what category name its author applied to it.] "

Point (14)

Article 13, Section 3 (: 96) : I suggest a rearrangement of the paragraphs in this Section. The rules for priority (present paragraphs (b) and (c)) should logically precede that for "Relief from priority". The following order is suggested, to include also the new provision proposed above :

(a) The suffix immaterial to priority.

(b) Vernacular names.

(c) Eligibility for the family-group.

(d) Relief from priority.

The title of the new (a) [or (b) if not moved] should be changed. As it stands, it is a weak and negative description of only one small part of the most important statement in Article 13.

Point (15)

Article 14, Section 4 (: 102) and Article 15, Section 6 (: 109) : (Invalid Emendations) I suggest that both these passages be omitted. All emendations are covered by Article 11. A taxonomist who wonders about the status of an Emendation will go to that Article, not to these passages.

Point (16)

Article 15, Section 2(c) (: 106) : If a name for a fossil is proposed now (1958) as " Xus albus smithi var. n.", is it or is it not " expressly stated " (by the " var. n.") that this is an infra-subspecific form (cf. the first clause of " c " with the wording of " a " for pre-1951 names) ?

Point (17)

Article 15, " Recommendations " 1 and 2 (: 109) : I have several suggestions here :

(a) Reverse the order of the two. We should first signalize, and then publicize (which is the order in Article 10, *Recommendations* 5 and 6 ; see p. 79).

(b) Write out the recommendation for publicity in the same form as that of Article 10, *Recommendation* 6, and omit the cross reference to the latter.

(c) Transfer the second paragraph of Article 10, *Recommendations* 6 to this *Recommendation* on Signalizing, and combine the two. I should also like to see a *Recommendation* that these changes be marked, as we suggest (in Article 10, *Recommendation* 5) for proposing taxa. We recommend that marked copies be sent to recording publications ; why not " mark " the changes in print, to assist recorders, cataloguers, and also taxonomists ? I suggest the following wording for *Recommendation* 1 (new number, as noted above) :

> **" Recommendation " 1. Signalizing change of rank.**—An author who first [changes an established form to a different rank, whether higher or lower,

should clearly indicate that the change is new, either by words or by an appropriate abbreviation, such as " new status ", " n. comb.", etc.].

Point (18)

Article 19, Section 1 (: 120) : I propose that consideration be given to substituting the word " generitype " for type-species. It has the following advantages : (a) It resembles " genotype " and will be only a slight change for taxonomists ; (b) it utilizes the regular combining form of the word genus, and suggests in itself the real meaning " type of the genus " ; (c) it avoids the hyphenated form " type-species ", which will often be written as two words anyway, and will be changed by some editors (I have already had this happen) ; and (d) it avoids adding the word species to sentences which may already use the word one or more times, creating awkward-sounding sentences.

Point (19)

Article 19, Section 2(a) (: 121) : Could this be placed first in the Article, and written to explain that wherever " genus " is used in this Article, the words " or subgenus " are to be understood ?

Point (20)

Article 19, Section 4(e) (: 129) : Dr. Rehder raises the question of whether this should apply to cases in which a generic name is based on a figure [cf. Article 6, Section 3(7)], where the identity of the included species is known ? It would seem incongruous, for example, to accept a round species as type when the original figure showed an identifiable square species.

Point (21)

Article 19, Section 5(b) (: 130, second paragraph) : The words " in establishing a genus " (lines 15–16) should be deleted, to agree with the second sentence in the paragraph. In the case of genera proposed without included species, the first author to associate name(s) of species with that genus (hence, the " original author " as defined in the second sentence) is not the one who established the genus.

Point (22)

Article 19, Section 5(d)(ii) (: 132) : It seems to me that this subparagraph should be deleted. If such species were not included after 1757, they are not eligible under Section 5(a). Even if it is desired to keep the subparagraph in the Code, its place should not be under paragraph (d), concerned with rigid construction of type-selection.

Point (23)

Article 20, " Recommendation " 2 (: 139) : (Labelling of Paratypes): It is proposed that the following sentence be added to *Recommendation* 2 :

> [Each remaining specimen (if any) of the type series should be conspicuously labelled a paratype, in order to identify clearly the components of the original type series.]

Although paratypes do not directly affect the nomenclatural fate of names, they are nevertheless often of significant interest to taxonomists. It is considered good practice to be careful and precise in marking the original type series. I believe that the Code of Nomenclature should help to further this practice by recommending it. I fear that failure to mention paratypes will encourage laxity or disregard for labelling them.

Point (24)

Article 20, Section 3(a)(i) (: 142) : (On selection of a lectotype). It is suggested that the principle of agreement with previous valid restriction should be stated positively, by adding the following words to the first sentence (lines 20–22):

> . . . [, provided it is consistent with the (if any) first valid restriction and any valid successive restrictions.]

Such a provision would contribute to stability by preventing upsetting changes in nomenclature. The principle was recognized in the neotype plan [cf. Article 20, Section 5(a)(v)], but apparently was overlooked at the Copenhagen Congress in connection with lectotypes, though fully as important there.

Point (25)

Article 20, Section 3(b) (: 144) : The expression *en masse* is subject to misinterpretation. Various workers have raised the question whether papers that contain a number of lectotype designations (e.g., recent papers by Stone and Knight on lectotypes of mosquitos) fall under the meaning of *en masse*. If it is not intended to include such papers, perhaps the wording should be modified to make it clear that it applies only to cases of blanket statements, like that in the Example. It is suggested that the first clause be amended to read " Lectotypes shall not be selected by general or sweeping statements, but, etc."

Point (26)

Article 20, Section 4 (: 145) : (General rules for neotypes) : It was the consensus and the intent of the Copenhagen sessions, as expressed in *Copenhagen Decisions*, Decision 34, to " play down " neotypes and to keep their use to a minimum of cases that seemed reasonable. In the light of this intent, Dr. Bradley's version of Purpose (paragraph (a)) is not acceptable. It weakens the position taken on neotypes. The following revision of paragraphs (a), (b), and (c) is proposed :

> [(a) Purpose.—The purpose of a neotype shall be to establish in certain limited cases a criterion by means of which a typeless nominal species or lower taxon may be objectively defined.
>
> [(b) Limitation.—A neotype shall be designated only in connection with revisionary work and then only in exceptional circumstances when it is desirable in the interests of stability. The words " exceptional circumstances " refer to those cases in which it is essential to [possible alternative for " essential to " : " more essential than restriction in "] solving a confused zoological problem, such as the confused or doubtful identities of closely related species for which holotypes or lectotypes are no longer extant.
>
> [(c) Prohibition.—A neotype shall not be established merely for its own sake, or as a matter of curatorial routine, or for a nominal species the name of which is not in general use.]

Point (27)

Article 20, " Recommendation " 16 (: 151) : This weakens Section 5 too much. I would prefer to see this eliminated, or worded so as to suggest that the same specimen be selected unless it is not consistent with the mandatory requirements.

Point (28)

Article 22, " Recommendation " 2 (: 160) : In my opinion, this does not correctly reflect the consensus of the Copenhagen Session, which wished to " play down " as much as possible the use of author's names, for higher groups. Copenhagen said that authors' names " need not be cited, except, where so desired, in . . . " (Decision 69). The *Recommendation* here goes far beyond that and says " should cite ". If anything, a *Recommendation* at this point should say " should not ordinarily cite the name of the author ", or at least " need not cite ". I propose the following :

> [*Recommendation* 2. Limited use of author's name.—Authors should not ordinarily cite the name of the author of a name of a supra-generic taxon,

but they may do so, where desired for historical or nomenclatural purposes in such works as catalogues or discussions of the validity of competing group-names.]

Point (29)

Article 22, " Recommendations " 5 and 7 (: 162, 165) : I suggest that these be omitted. Taste, habit and editorial practice will govern the use of abbreviations.

Point (30)

Article 22, " Recommendation " 10 (: 165) : Dr. Yochelson suggests that provision should be made for a double citation, e.g., 1956 [1957], for cases where a date is stated, but is not the correct one, from external evidence.

Point (31)

Article 24, Section 4(a) (: 172) : I suggest that this provision be confined to specific names, and possibly not even there (cf. discussion under Article 24, Section 12). If it is, it would also eliminate the exception from Section 8(a) : " except as specified in Section 4 ".

Point (32)

Article 24, Section 6(d) (: 175) : This is not the way in which genera are treated, if found to be based on misidentified type species. Why not have uniform treatment in the Code ? I oppose the paragraph as it stands. It might involve us in a great deal of trouble with synonyms proposed between the original use of a name and its valid (under this provision) use.

Point (33)

Article 24, Section 8(a) (: 176) : See discussion under Article 27, Section 1 (Point (37)).

Point (34)

Article 24, Section 11(b) (: 178, line 25) : Dr. Yochelson has pointed out that it would be desirable to state more positively and definitely (more than in the phrase " but under no other circumstances ") that junior secondary homonyms no longer considered congeneric with their seniors are not to be renamed. It is important that this be clearly understood.

Point (35)

Article 24, Section 12 (: 181) : A troublesome element seems to have been introduced in this Section, which takes the place of a portion of Article 35 of the old Code. That old Article provided that specific names of the same origin and meaning were to be considered homonyms if they differed only by the spellings listed there. All examples given were, within each pair, of the same origin and meaning. The inference is clear that if two names were of different origin and meaning, though differing only in the spellings mentioned, they would not be homonyms.

In the new version, however, there is a departure which is a potential troublemaker. Apparently names of different origin and meaning are to be considered homonyms if they differ only by the letters given in the list on pp. 181–182 (cf. second Example under " the use of, ei, i, or y " : *smithi* and *smythi*, based on names of different persons, and part (11) if different persons were involved in names using the prefixes Mac, Mc, or M'). This may be dangerous, and should, I believe, be reconsidered. For example an actual case in the fly genus *Chrysops* : *calidus* Walker (from South Africa) and *callidus* Osten Sacken (from the U.S.A.), which are Latin adjectives of different meaning. Surely *smithi* and *smythi* are just as distinct as *thompsoni*, *tompsoni*, *thomsoni* and *thomseni*, all of which, on the basis of this present section, could appear in the same genus without being homonyms under any of its provisions.

Perhaps the words in lines 8–9 (" that would be homonyms if spelled alike ") were intended to meet this, but if so the *smithi-smythi* example should not have been introduced, and number 11 might be questioned.

From considering the above potential dangers, I propose :

1. That the introductory wording of Section 12 be strengthened, as in the old Code, by clear reference to " names of the same origin and meaning " ;

2. that the *smithi-smythi* example be deleted from subsection (2) ;

3. that the merit of including subsection (11) [the Mac, Mc, M' names] be critically re-examined ; and

4. that if the preceding changes are made, a *Recommendation* be added calling attention to the undesirability of introducing names which, although technically acceptable because of different origin and meaning (such as *calidus-callidus*) are nevertheless confusing.

Point (36)

Article 24, Section 13(a)(i) (: 183) : Should a similar provision be written into the Code for differences in transliteration from languages that do possess alphabets ? Example : *pawlowi* (German transliteration) and *pavlovi* (English transliteration) from the Russian. Two of the special cases listed in Section 12(a) are of this class.

Point (37)

Article 27, Section 1 (: 191) : Should a provision (c) be added, to consider " u " and " v " as the same Latin letter (permissible variants) in names such as *Cryptonevra* or *Cryptoneura* ? Both of these spellings have been used in Diptera, and the former has been emended to *Cryptoneura*. Are the two homonyms ? A current problem also involves *Macronevra* Macquart (1834) in Diptera, and *Macroneura* Walker (1837) in Hymenoptera. Are the two homonyms ? As interesting sidelights, the dipterous genus was emended to *Macroneura* and the hymenopterous genus to *Macronevra*. *Macroneura* would be awkward if validated in Hymenoptera because of another and well-known hymenopterous genus with similar sound : *Macronura*. Article 24, Section 8(a) will also be affected by a decision on this point.

Point (38)

Glossary (: 274) : Cotype : Possible addition " [because of some usage in the sense of paratype] ".

Point (39)

Glossary (: 276) : Group, collective group : The explanation here is not correct as far as the status of specific names is concerned, as used in parasitology. Note must also be taken that some collective group names (e.g., *Cercaria*) were first proposed as good generic names, but later, by general agreement and customary practice, came to be used as collective group names.

Point (40)

Glossary : Should *nomen nudum* be defined ? Many people regard a manuscript name as the real *nomen nudum*—a bare name, nothing else.

Point (41)

Glossary : It has been suggested that the Glossary be expanded to include definitions of " objective " and " subjective " as they are used in the Code, and also any specialized definitions of words used in a special sense. " Homonym " is defined, but " synonym " is not. See also my comment at the end (below) on " designation " and " selection ".

Point (42)

Glossary : The desirability of cross-indexing has also been suggested, so that a term like " primary homonym " would appear in its proper alphabetical position with cross reference to the discussion under " homonym ".

Point (43)

Glossary : " Nom. nov." and " nom. mut." (from Article 21, Section 4) should be defined, especially the former, to be sure it means substitute name and not in the sense of " n. sp." nor " sp. n.".

Point (44)

Glossary : Define " invalid name " as well as " valid name " and define " valid ", " available ", " occupied ".

Point (45)

General Comment on terminology : General comment (especially for Articles 19 and 20, but used elsewhere).—Is it worthwhile to make a fine distinction between " designation " and " selection " ? Some taxonomists do not distinguish. Others see no need to distinguish. The old Code used " designation " in places where the Draft uses " selection ", e.g., in the expression " type by subsequent designation ". It seems to me that to change the established usage, there should be some very good reasons for doing so. At present, these escape me ; it seems like hair-splitting. One term, instead of two, would contribute its mite toward simplicity. Unless some cogent reasons are brought out, I would suggest that the appropriate term for the formal, published, nomenclatural action be " designated ". If it is decided to give " designation " and " selection " certain special meanings for nomenclatural purposes, those should be defined in the Glossary.

Point (46)

Index : I suggest that an Index would be useful, in addition to the Table of Contents. It could be printed in the smaller sized type used for the " Discussions ", and two columns to a page. Page reference only, not the details of Article, Section, etc., unless perhaps an indexed item appeared in more than one place on a given page. Subject index only, without mentioning names of taxa used as Examples. There are many individual subjects for which a reader might pick up the Code and want to turn quickly to the page, or want to be sure that a particular passage was the only section on that subject, without searching through the Table of Contents. Examples of such items : Tautonymy, pre-Linnaean names, cotypes, *nomen nudum*, connective vowel, etc. For brevity, words or expressions that are defined in the Glossary could be starred without giving the page number in the Glossary, e.g., *emendation, *nomen nudum*, *stem, etc.

DOCUMENT 33/3

Miscellaneous Comments on the Draft of the " Règles "

(Commission Reference : Z.N.(S.) 1329)

By **TADEUSZ JACZEWSKI**

(*Polish Academy of Sciences, Institute of Zoology, Warsaw, Poland*)

(Enclosure to a letter dated 19th February 1958)

Point (1)

Article 3, Section 2 (: 39, line 15) : At the end of the sentence it seems desirable to add the following words : " and shall be subject to the Rules of zoological nomenclature ".

Point (2)

Article 6, Section 1(g) (: 49, lines 24 and 25) : To cover all possible similar cases in the future it seems desirable to replace the words " the genitive case " by " a case other than the nominative case ". The same corrections should be made also on p. 56, line 20, and p. 230, lines 16 and 17.

Point (3)

Article 13, Section 4(a) (: 97 and 98) : Copenhagen Decisions 54(1)(a) should be rescinded as contradictory to the type-principle in zoological nomenclature. Otherwise we shall have valid family-group names derived from invalid and rejected generic names, a situation plainly absurd.

Point (4)

Article 14, Section 5 (: 103, line 2) : The words " and not counted as part of it " do not seem absolutely necessary.

Point (5)

Article 15, Section 7 (: 110, line 14) : The words " a comma and " could be cancelled ; there seems to be no good reason to use a comma in such cases.

Point (6)

Article 16, Section 2(a)(i) (: 112, line 25) and Section 2(a)(iii) (: 113, lines 14 and 15) : The example " *Capra hircus* X *Ovis aries* " is particularly ill chosen as such crosses result in abortions (cf. : F. Cavazza, *Atti Soc. Ital. Sc. Nat.*, Milano, 78, 1939, pp. 467–473 ; R. O. Berry, *Journ. Hered.*, Baltimore, 29, 1938, pp. 343–350 ; A. I. Lopyrin and N. V. Loginova, *Usp. Sovr. Biol.*, Moskva, 36, 1953, pp. 227–235). It would be better to give the " classical " example of *Equus caballus* × *Equus asinus* or vice versa.

Point (7)

Article 19, " Recommendation " 4 (: 135, line 7) : There should stand a colon at the end instead of a full-stop.

Point (8)

Article 22 (: 156, line 3) : The words " or authors " should be added following the word " author ". Many names have been established jointly by two or even more authors.

Point (9)

Article 22, Section 4 (: 160, line 24) : It should be " species " instead of " subspecies " at the end of this sentence.

Point (10)

Article 22, " Recommendation " 4 (: 161) : It should be added that the abbreviation " anon," is to be used when the anonymous author remains unknown ; this follows only indirectly from the wording on p. 162, lines 12–14.

Point (11)

Article 22, " Recommendation " 6 (: 165, line 2) : The words " never be applied after its original establishment " should be replaced better by " be given only in the original publication establishing that taxon ; in particular, if a taxon is being established as new in a preliminary note published in advance of the full paper or work, it is admissible to treat it again as new in this subsequent publication ".

Point (12)

Article 22, " Recommendation " 10 (: 165, line 23) : The words " in parentheses or in brackets " should be added following the word " enclose ".

Point (13)

Article 23, Section 1(a)(ii) (: 168) : The matter should be illustrated by appropriate examples.

Point (14)

Article 24, Section 6(d) (: 175, line 17) : It should be " type-genus " instead of " type-species " in the first place where this expression occurs in this line.

Point (15)

Article 24, Section 9 (: 177) : An explanation should be added concerning the invalid selection by various authors of type-species of genera, other than the valid type-species under the Rules, and the establishment in this way of junior homonyms of the corresponding generic names.

Point (16)

Article 24, Section 10 (: 177, line 21) : " Smith " should be printed in Roman type.

Point (17)

Article 24, Section 12 (: 181) : In my opinion points (1)–(7) can apply only to names derived from Greek or Latin (classical) words ; the example of " *smithi* " and " *smythi* " given in connection with point (2) is not appropriate, strictly speaking these two names are not homonyms, but there can be no doubt that a recommendation to avoid such cases would be highly desirable.

Point (18)

Article 24, Section 12(9) (: 182) : Point (9) is difficult to understand without appropriate examples.

Point (19)

Article 24, Section 12(a) (: 182, lines 21 and 23) : The pairs " *saghalinensis*, *-e* and *sakhalinensis*, *-e* ", and " *tianshanicus*, *-a*, *-um* " are only particular cases of the general problems dealt with on p. 183, in Article 24, Section 13(a)(i) ; these cases have been already decided by the Commission ; a corresponding shifting of the whole point (a) from Article 24, Section 12 to Article 24, Section 13 would seem more appropriate.

Point (20)

Article 24, Section 13(a)(i) (: 183, line 3) : The words " that uses an alphabet other than the Latin or " should be inserted following the word " language ".

Point (21)

Article 26 (: 190) : Is Article 26 necessary at all ?

Point (22)

Article 28, Section 2(a) (: 195, lines 3 and 4) : There does not seem to be sufficient reason for a different treatment of modern (barbarous) personal names ending in " q " and for the insertion in such cases of the letter " u " between " q " and the ending. In other words I am in favour of " *leclercqi* " not " *leclercqui* " ; any unnecessary complication of the Rules should be avoided.

Point (23)

Article 28, Section 2(h) (: 199, line 15) : Following the word " prefixes " it seems desirable to insert, between commas, the words " even if they are former nobiliary particles ". The examples given in line 17 represent just such cases.

Point (24)

Article 28, Section 4(a)(i) (: 201, lines 24–26) : The words " represented by . . . Schedule " should be replaced simply by the word " omitted ". In this connection I should like to refer to a communication on this subject which I addressed some time ago to the Office of the Commission setting out the official opinion of the Polish Group for Questions of Zoological Nomenclature.[1]

Point (25)

Article 28, Section 12(b)(3) (: 217, line 24 and : 218, line 1) : It should be " privative " instead of " privitive ".

Point (26)

Article 28, Section 16(b) (: 223, lines 22 and 23) : It would be useful to add the following examples as well : " *scopolii* (from Scopoli) ; *chrostowskii* (from Chrostowski) ; *esakii* (from Esaki) ".

Point (27)

Article 28 (: 234, line 15) : It should be " AETATIDAE " instead of " AETATIDIDAE ".

Point (28)

Article 29, Section 7(aa) (: 263, line 20) : The words " using an alphabet other than Latin or " should be inserted following the word " language ".

Point (29)

Glossary (: 273, lines 3 and 4) : A publication in which its author is hidden by a pseudonym or by mere initials is, strictly speaking, not " anonymous " but " cryptonymous ".

Point (30)

Glossary (: 275, line 14) : Would it not be better to replace the word " precise " by " special " ?

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[1] The communication here referred to has been earmarked for inclusion in the group of papers relating to the treatment of names, letters in which bore diacritic marks when first published, which will constitute the documentation for the consideration by the coming London Congress when dealing with the problem of diacritic marks in relation to zoological names. It is planned that this group of papers should appear in an early Part of the present (Agenda) volume. (Intl'd) F.H. 19th March 1958.

Point (31)

Glossary (: 275) : It seems desirable to add the entry " editor ".

Point (32)

Glossary (: 275, lines 20 and 21) : A full-stop should be put in both places following the abbreviation " e ".

Point (33)

Glossary (: 276, line 16) : The word " and " should be replaced by a comma, for it is not a full list of the possible examples.

Point (34)

Glossary (: 277, lines 32–40) : Both taxonomic and non-taxonomic forms seem to be mixed up in this paragraph. Seasonal, sexual and caste forms are in my opinion non-taxonomic forms as they are unable to constitute taxonomic and non-taxonomic infrasubspecific forms, but it seems that the matter should be explained in the Glossary in a manner as clear as possible.

Point (35)

Glossary (: 278, line 13) : The words " the dipthong " should be cancelled.

Point (36)

Glossary (: 278) : It seems desirable to add the entry " manuscript name "

Point (37)

Glossary (: 280) : It seems desirable to add the entries " *nomen nudum* " and " preliminary note ".

Point (38)

Glossary (: 281, line 3) : Following the word " with " the words " editor and with " should be inserted.

Point (39)

Glossary (: 281, line 7) : I am in favour of the omission of the words " and comma ".

Point (40)

Glossary (: 281, line 26) : The singular is " species inquirenda ", the plural " species inquirendae ".

Point (41)

Glossary (: 281, line 28) : " Sedis incertae " is correct both for the singular and for the plural of species.

Point (42)

Glossary (: 283, line 15) : *Holometabola* does not seem to be a good example, as it is often considered at present to be an artificial group ; it could be given instead : *Palaeoptera* or *Neoptera*.

Point (43)

Glossary (: 284, line 34) : It should be " subspecies " instead of " species ".

Point (44)

Glossary (: 285, line 1) : I am in favour of the omission of the words " and comma ".

DOCUMENT 33/4

Miscellaneous Comments on the Draft of the " Règles "

(Commission Reference : Z.N.(S.) 1329)

By **CURTIS W. SABROSKY**

(*U.S. Department of Agriculture, Agricultural Research Service, Entomology Research Division, Washington, D.C., U.S.A.*)

(Enclosure to a letter dated 7th March 1958)

For brevity, expressions like " I suggest " or " I propose " are usually omitted, and the suggestion is stated positively in a concise form.

Point (1)

Article 1, Forward (: 35, line 8) : Substitute " animals " for " organisms ".

Point (2)

Article 1, Forward (: 35, line 9) : Substitute " paleozoology " for " paleontology ".

Point (3)

Article 1, Section 4 (: 36, line 25 and : 37, line 1–2) : The bracketed words seem unnecessary because of " as such " in line 23, page 36.

Point (4)

Article 1, Section 5 (: 37, line 8) : Substitute " paleozoology versus neozology " for " paleontology versus neontology ".

Point (5)

Article 3, " Recommendation " (: 39, line 8) : For consistency, and precise reference, should *Recommendations* be numbered even where there is only one ?

Point (6)

Article 5, Section 1 (: 42, lines 18 and 19) : Substitute " any action or name " for " any action or usage of a name ". The association of " usage " with " valid " seems undesirable. There may also be conflicting " usages ".

Point (7)

Article 5, " Recommendation " 2 (: 45, line 8) : Should we add " by virtue of synonymy " to the clause ending " is invalid " ? Or was it intended to include here even primary homonymy ? The latter question applies also to *Recommendation* 4. It is true that these *Recommendations* follow Section 3, which emphasizes synonymy, but if only synonymy was intended to be covered by "*Recommendations*" 2 and 4, it would be better to include words to make that clear, to avoid the possibility of having the *Recommendations* quoted out of context.

Point (8)

Article 6, Section 1(c) (: 49, lines 5 and 6) : Note the reference to Article 28, Section 12(a). What if a name like *Potamida* had been published in the plural form " Potamidae ", would this not be correctable under Article 28, Section 10(a) ?

Point (9)

Article 6, Section 1(g) (: 49, line 23) : Add " in Latin " to " spelled out ". This compares with Article 28, Section 18(c).

Point (10)

Article 6, Section 1(m) (: 51, line 25) : Substitute " citation " for " establishment ". The latter gives the effect of requiring a new genus.

Point (11)

Article 6, Section 5(c) (: 55, line 8) : Substitute " published " for " established ". The connotation of the latter word does not fit " conditionally ' ; it was not really established, but just nomenclaturally available.

Point (12)

Article 6, Section 6 (: 57, line 1) : Substitute " that " for " which " ; *cf*. comparable structure in the title to Section 5.

Point (13)

Article 6, Section 7 (: 59, line 25) : Delete " established " or substitute some other word. Its use here would imply that the taxon was already established.

Point (14)

Article 6, Section 7 (: 59, lines 27–29) : It did not work this way in the case of *Halicampus grayi*. The claimed misidentification (line 5 above) is based on esoteric information, and is not consistent with the *ipso facto* stated here.

Point (15)

Article 6, Section 8(c) (: 61, line 2) : Delete " but ".

Point (16)

Article 7, Section 4(3) (: 67, line 8) : Suggest " publication " in place of " appearance in print ".

Point (17)

Article 7, Section 4(6) (: 67, lines 14–17) : At one period it was quite common to have author's preprints. In the case of preprints from the Proceedings of the U.S. National Museum, they were set by a different printer and thus are actually different in physical form from the Proceedings article though the same in content (*cf*. Blackwelder, 1952, *Systematic Zool.* **1** : 86–89). These have always been accepted as the earliest publication for the names involved.

Point (18)

Article 7, Section 4 (: 67, line 25) : 1873, not 1813.

Point (19)

Article 8, Section 1(4) (: 70, line 10) : Should there not be cross-references here, e.g., to Article 11 ?

Point (20)

Article 8, Section 1, Limitations (: 70, line 18) and Section 2, Limitations (: 71, line 25) : It would make reference easier if these were numbered or lettered in some way.

Point (21)

Article 8, Section 2 " Recommendation " (: 72, line 7) : Suggested insertion, after " of this sort ", " or has no special appropriateness ".

Point (22)

Article 9, Section 1(f) (: 76, line 2) : Why not the " earliest " date, if it is compatible with the evidence ?

Point (23)

Article 9, " Recommendation " 1 (: 76, line 7) : Because of the many slips in " best-laid schemes ", printing schedules, etc., I am always suspicious of days of publication that are printed in the same issue.

Point (24)

Article 10, " Recommendation " 9 (: 80, lines 21–22) : The " *Poly-* " names actually seem quite distinct. The *Calandra/Calendra* example is the better one.

Point (25)

Article 10, " Recommendation " 9, footnote (: 80, line 24) : Substitute " Generic and subgeneric names " for " Words ", and substitute " for a short period " for " at one period ".

Point (26)

Article 10, " Recommendation " 12 (: 81, line 24) : Substitute " its " for " the ".

Point (27)

Article 10, " Recommendation " 12 (: 81, line 26) : Substitute " The latter " for " This ".

Point (28)

Article 10, " Recommendation " 23 (: 84, lines 8–10) : The title is confusingly suggestive of " replacement names ". The provision should also be stated positively : " he should designate it ' sp. n.' or its equivalent. The expression ' nom. nov.' or its equivalent should be restricted to substitute names ". In line 9, should it not be " specimen " rather than " type " ?

Point (29)

Article 10, " Recommendation " 24 (: 84, lines 12–16) : Should it ever be done this way ? Should not the renaming of a homonym be pre-eminent, after which the name can be applied zoologically to the material at hand ? I propose the deletion of this *Recommendation.*

Point (30)

Article 10, " Recommendation " 28 (: 86, lines 14–16) : I question this. Is not a key a worthy diagnosis, with the characters differentiating the species from its relatives ?

Point (31)

Article 11, Section 1(a) (: 88, line 2) : The title should be broader ; as for example : " Original Spellings, Emendations and Errors ", or " Original, Emended and Erroneous Spellings of Names " (last two words might be deleted).

Point (32)

Article 13, Section 3 (: 97, between lines 19 and 20) : Suggest the addition of a new subsection : " (d) *Homonymy.*—If homonymy in family-group names should arise from similar but homonymous names of type-genera, the solution shall rest with the Commission (*cf.* Article 24, Section 6(b)) ".

Point (33)

Article 15, Section 5(d) (: 109, line 21) : comma after " date ".

Point (34)

Article 15, Section 7(b) (: 110, line 14) : Suggest omission of the words " a comma and ", as being unduly ritualistic. It would be violated, ignored or overlooked about as often as followed.

Point (35)

Article 17 (: 115–116) : This seems much too long. I would suggest combining (a) and (b) into one section. Section (a)(1) hardly needs stating; of course the labels on the holotype (or lectotype) have precedence (subject to relatively rare cases when they can be proved to be in error). Subsection (2) and (3) really belong with (b), or at least could be combined with it under the title " Corrected or restricted typical localities ".

Point (36)

Article 18 (: 117, line 2) : The title is somewhat misleading, because it does not include all types. This suggests a possible rearrangement to put all provisions for types in the same article. The order would then be :

Foreword

Sections 1 and 2

A. Phylum-Group, etc.
B. Family-Group
C. Genera
D. Species and Lower Categories

The above is the logical arrangement, but may be objected to because of the length of C and D (now Articles 19 and 20). If these are kept separate, then the title of Article 18 should be changed to be more descriptive.

Point (37)

Article 19, Section 3(b) (: 125, line 6) : Add " or relationship " after " identity ".

Point (38)

Article 19, Section 3(b) (:125, line 8): Add ", including infra-specific names " after " cited ", to eliminate any question about included subspecies.

Point (39)

Article 19, Section 4 (a) (2) (: 127, line 10): Add " or relationship " after " identity ".

Point (40)

Article 19, Section 4(e)(iii) (: 129, lines 21–22) : It is suggested that this relatively common " method " be referred to as " Type by Subsequent Monotypy ", this expression to be added, within parentheses, at the end of the provision.

Point (41)

Article 19, Section 5(c)(iv) (: 132, lines 6 and 11) : Not a Rule, but an *Opinion.*

Point (42)

Article 19, Section 5(d)(iii) (: 133, line 3) : Use of " designation " here is inconsistent with use of " type-selection " in the title of Subsection (d) and Section 5.

Point (43)

Article 19, " Recommendation " 3ν (: 135, line 1) : Substitute " Position " for " Page ".

Point (44)

Article 20, " Recommendation " 3 (: 139, line 12) : Omit " any or ".

Point (45)

Article 20, Section 1(d) (: 140, lines 6 and 8) : " type ", not "types" (line 6) ; change to " of a different type-specimen " (line 8).

Point (46)

Article 20, " Recommendation " 5 (: 140, line 11) : The title " replacement species " may confuse by being dangerously suggestive of " replacement names "

Point (47)

Article 20, " Recommendation " 6 (: 140, line 24) : Add " except where necessary in citations of literature or labels on specimens ".

Point (48)

Article 20, Section 3(a)(i) (: 142, line 23, : 143, line 1) : For stability I strongly favor the bracketed provision, but I should prefer to see it made a positive provision. I suggest therefore, that there be added to line 22, after " lectotype ", the words " provided it is consistent with the (if any) first valid restriction and any valid further restrictions ". If this is adopted, the bracketed words " if not . . . revisers " would then be deleted.

Point (49)

Article 20, Section 5(a)(viii) (: 147, line 12) : Insert " geological " before " horizon ", and omit the asterisk and associated footnote.

Point (50)

Article 20, Section 5(b) (: 148, lines 11–15) : Suggest deletion of this paragraph, as unnecessary. It can always be done by Plenary Powers, mentioned or not.

Point (51)

Article 20, Section 5(c) (: 148, lines 17–20) : As worded, this sounds as if it applied to all neotypes, both past and future. The past ones are treated in Section 7. This should somehow be worded to apply to the future, perhaps with a stated date.

Point (52)

Article 20, Section 7 (: 150, lines 19ff.) : Should not Section 7 precede the present Section 6 ? The latter affects 7 as well as the earlier ones.

Point (53)

Article 21, Section 2(a)(ii) (: 152, lines 21–24) : The sentence beginning " No describer " is grammatical, but seems awkwardly involved.

Point (54)

Article 22, Section 5(c)(ii) (: 162, line 30) : Omit " or absence " ; presence is the critical point.

Point (55)

Article 22, Section 5(c)(ii) (: 162, line 31) : " affect " not " effect ".

Point (56)

Article 22, Section 5(c)(iv) (: 163, line 17) : The date, being irrelevant to the point of the paragraph, would better be omitted.

Point (57)

Article 22, " Recommendation " 9 and Discussion (: 165, lines 14–17) : Use of " taxonomist " would not remove popular articles written by taxonomists. Nor would it remove faunal lists, biological papers and minor notes, in which such complete references are irrelevant and wasteful of space.

Point (58)

Article 22, " Recommendation " 10 (: 165–166) : It seems pedantic to try to differentiate between (1956) and [1956]. I suggest that alpha and beta be combined, using the statement now under alpha plus the words " , or if it can be ascertained from other evidence in the volume in which it was published (e.g., signature dates, or dates on the covers) ".

Point (59)

Article 24A (: 169) : Should there be a general statement on the relative priority of a substitute name and synonyms of the preoccupied name which it replaced ? The problem is especially acute where a synonym older than the substitute name is discovered long after the proposal of the latter.

Example : In the dipterous family ASILIDAE, *Eristicus* Loew was proposed in 1848, was found to be preoccupied and was renamed *Neoeristicus* by Osten Sacken in 1878. Much later, *Eicherax* Bigot (1857) was found to apply to the same genus.

Point (60)

Article 24, Section 1(i) (: 170, lines 4–10) : Suggest omission of this paragraph, as unnecessary. If used, in line 8 substitute " is necessary to validate " for " results in validating ".

Point (61)

Article 24, " Recommendation " 1 (: 170, lines 13–15) : Suggest omission of *Recommendation* 1. This is too much note work. Rename it, call it to the attention of the author, or send the item to someone interested in the group involved.

Point (62)

Article 24, Section 10(a) (: 177, line 8) : For simpler wording, substitute " equally to " for " without distinction between ", to correspond with the wording in Section 7 (: 175).

Point (63)

Article 24, Section 10(c) (: 178, lines 1–2) : In the title, substitute " Parenthetical Nature " for " Irrelevance ". Omit the words " or absence " ; the presence of a subgeneric name is the point of issue.

Point (64)

Article 24, Section 11(b)(i) (: 179, lines 1ff.) : Does rejection include both the adoption of a substitute name to replace the homonym, and adoption of the next available synonym to replace the homonym ? Whether only the first was intended, or both, will it be clear to readers ?

Point (65)

Article 24, Section 11(b)(iii) (: 179, lines 20–24) : I agree with Dr. Bradley that this paragraph should be repealed.

Point (66)

Article 24, Section 13(a) (: 182, line 26) : Suggest " Specific and/or subspecific names ".

Point (67)

Article 24, Section 13(b) (: 183, line 18) : Might add the cross-reference " [*cf.* Section 10(b)] ".

Point (68)

Article 24, Section 13(c) (: 184, lines 1–9) : I agree that this should be repealed.

Point (69)

Article 25, Section 1 (: 188, lines 4–5) : Substitute " can " for " shall " in each line. This is more than mandatory ; it is impossible.

Point (70)

Article 25, Section 1, Examples (: 188, line 12) : For clarity and quicker comprehension, insert " Gmelin, 1790 " after *Taenia ovilla*.

Point (71)

Article 27, Section 1(b) (: 192, line 7) : Substitute " are considered as Latin letters for the purposes of this Code ", for " may be used in zoological names ".

Point (72)

Article 28 (: 193, line 2) : Suggested title : " Grammar, Orthography and Typography ".

Point (73)

Article 28, Section 1 (: 193, line 4) : Suggest " Name-formation " instead of " Word-formation ".

Point (74)

Article 28, Section 1(a) (: 193, lines 5–7) : This paragraph should be omitted. The sense is contained in Article 11, Section 1(a), which is the Article to which one would turn if he sought to know whether he should change an inappropriate connective vowel.

Point (75)

Article 28, Section 2(b) (: 195, lines 9–16) : Should this not be revised and expanded to include any compound subject treated as a unit, as "terrae novae", " quercus albae " (a plant host), etc. ? (*Cf.* old Article 15, and *Opinion* 50.)

Point (76)

Article 28, " Recommendation " 6 (: 195, lines 20–25) : Suggest addition to line 23 : " or the more distinctive ". In the example, from Bethune Baker, *bethunei* would have been a far better choice ; there are too many Bakers. In the example from Guérin-Méneville, I suggest using the generic name *Guerinia* as an example, particularly because the provision has now been broadened to include generic names.

Point (77)

Article 28, footnote (: 195, line 27) : " second ", not " first ".

Point (78)

Article 28, footnote (: 195, lines 28–31) : The name was dedicated to Lynch, using one of his names, not to Lynch's mother. Why should it not be corrected to *arribalzagai* ? My Christian name is my mother's family name, but I would not expect a name dedicated to me to be spelled *curtisae.*

Point (79)

Article 28, " Recommendation " 11, Examples (: 199, line 17) : *vanderhoecki* and Vanderhoek are not consistent.

Point (80)

Article 28, " Recommendation " 12 (: 200, line 10) : *lherminieri* not *l'herminieri* (*cf.* Section 4(b), if approved).

Point (81)

Article 28, Section 3(a)(1) (: 201, line 1) : Transfer " (*cf.* 11/1, a) " from line 8 to line 1 to follow " error ".

Point (82)

Article 28, Section 11(a) (: 208, line 14) : Italicize *Piesma.*

Point (83)

Article 28, Section 11 (: 213, lines 11–12) : Suggested example : *Piesma*, to avoid the possible impression that neuter nouns end in *-noma.*

Point (84)

Article 28, footnote (: 213) : Also the " *-noma* " nouns, from the Latin feminine noun, noma.

Point (85)

Article 28, Section 12 (a) (: 215, line 13) : Reference should be Section 6(1)(c) not Section 6(1)(d).

Point (86)

Article 28D (: 220, line 20) : Omit the " Sub ". Should read " Infra-Specific ".

Point (87)

Article 28, Section 14 (: 222, lines 5–7) : What about specific names such as *M-nigrum*, so named specifically because the color pattern resembled a capital " M ". A small initial letter destroys the effectiveness of the comparison.

Point (88)

Article 28, Section 18 (: 229, line 23) : Suggested title : " Forbidden and unavailable names ".

Point (89)

Article 28, Section 18(b)–(f) (: 230, lines 2, 8, 22) : Would " available " be better, nomenclaturally speaking, than " admissible " ?

Point (90)

Article 28 (: 238–242) : I suggest adding *pous, podos* (foot)—PODIDAE. So many names involve this word, and the " stem " for forming the family name has been disputed. In this table, it would appear to fall in number 27, but that would be an incorrect conclusion.

Point (91)

Article 28 (: 238, line 7) : Need two commas : " Greek nouns, if a vowel, is . . . "

Point (92)

Article 29, Section 2 (: 245, line 13) : Suggest " clarification " for " elaboration ".

Point (93)

Article 29, Section 3(b)(v) (: 246, lines 19–27) : This should read that the Commission is responsible for considering the needs of such fields. As one of my colleagues has expressed it, it is " utterly silly " for such fields as veterinary medicine and horticulture to have representation.

Point (94)

Article 29, Section 3(e)(iv) (: 248, lines 4–6) : The first sentence could be omitted, as duplicating the statement under (e).

Point (95)

Article 29, Section 6(a) (: 253, lines 4–8) : This should never be done without previous publication notice of the proposal, and opportunity for discussion.

Point (96)

Article 29, Section 6(c)(i)(1) (: 254, line 10) : Suggest insertion of " at least " before " two other serials ".

Point (97)

Article 29, Section 6(c)(ii) (: 254, line 30) : " did not consistently apply ".

Point (98)

Article 29, Section 6(c)(iii) (: 254–255) : This is a pitifully small proportion for an action as important as Suspension of the Rules. See also page 269, lines 14–17 (Article 29, Section 12(a)(3)).

Point (99)

Article 29, Section 7(a)(v) (: 258, line 27) : " rendered " or " published " ? I should think the latter would be better.

Point (100)

Article 29, Section 7(e) (: line 16–18) : This is now stated in a very mandatory way. Preferable : " It shall be the duty of the Commission to consider the status of long-overlooked names that threaten stability, and to decide whether to annul them under its Plenary Powers ".

Point (101)

Article 29, Section 12(a)(1) (: 269, lines 8–11) : This could conceivably permit a mere handful, even two or three, to pass an *Opinion*. Surely some minimum number should be fixed, or better, a rule that no *Opinion* can be presented and passed at a Congress without opportunity first for the entire Commission to vote on it. I would apply this to the entire Section 12, not merely (a).

Point (102)

Article 30 (: 271) : A statement on the text or texts to be considered substantive should be included. There should also be included a definite statement with regard to the right of quotation, similar to the statement in *Copenhagen Decisions* : 123–124. This is a minimum. Actually, I am opposed to copyright of material which should rightfully belong in the public domain. If the price for the Code is reasonable, no one is going to pirate an edition, simply because of its size and the relatively limited audience for that type of work.

Point (103)

Article 30, Section 2(a) (: 271, lines 12–13) : I propose to strike out subsection (a). There must always be a Section on Nomenclature at a Congress, and there should be no loophole to make it possible to evade having one. Congress members are not admitted to Commission meetings, and the Plenary Sessions of the Congress are not an appropriate open forum for discussion of details of nomenclature.

Point (104)

Glossary (: 273, line 17) : My dictionary gives " binominal " as an adjective, not as a noun. The noun is binomial.

Point (105)

Glossary (: 275, line 20) : The " q.v." is misleading. One logically looks for " automatic correction " either under " a " or under " c ", but finds nothing. I finally found it under " spelling ".

Point (106)

Glossary (279, lines 29–30) : Is not this what most zoologists call *nomen conservandum* ? Is the distinction necessary ? It seems to me both pedantic and confusing.

Point (107)

Glossary (: 281, line 4) : Quadrinominal is an adjective. The noun is quadrinomial.

Point (108)

Glossary (: 281, line 7) : Suggest omission of "and comma". This is pedantic and will often be ignored, overlooked, or deleted by editors.

Point (109)

Glossary (: 284, line 35) : Trinominal is an adjective ; the noun form is trinomial.

Point (110)

Glossary (: 285, line 1) : Suggest omission of "and comma". Same comments as in Point (108).

Point (111)

Glossary (: 285, lines 41 and 42) : This should be a Foreword, on page 273.

DOCUMENT 33/5

Miscellaneous Comments on the Draft of the " Règles "

(Commission Reference : Z.N.(S.) 1329)

By **RAYMOND C. MOORE**

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(Statement dated 1st March 1958)

Following are statements of suggested changes in the draft of the Zoological Code (*Bull. zool. Nomencl.* **14** : 11–285) with accompanying comments. They are circulated for advance consideration by participants in the Colloquium scheduled to be held during July 1958 in London and by others who may wish to express opinions. The presently formulated suggestions are additive to those recently offered by Curtis W. Sabrosky, with virtually all of which I concur.

In portions of Articles here considered (serially indicated for reference as Point (1), Point (2), etc.), quotations from the draft prepared by J. Chester Bradley are indicated by quotation marks, suggested deletions by the use of brackets, and new wording by the use of small capital letters. Comments are intended only for readers of this Circular and not at all as additions to the draft suitable for publication, such material being given in the draft as " Explanation ".

Point (1)

Article 1, Foreword (: 35) **:** Foreword : Zoological nomenclature [is] CONSISTS PRIMARILY OF the system of names applied to taxonomic groups of [organisms] ANIMALS (taxa) known to occur in nature, whether living or as fossils. [Palaeontology] PALAEOZOOLOGY has no separate system. SECONDARILY AND SUBORDINATELY, ZOOLOGICAL NOMENCLATURE CONSISTS OF NAMES APPLIED TO groups OF ANIMALS AND ANIMAL-FORMED PRODUCTS that [are] MAY BE without taxonomic significance. [may bear Latin names that simulate those of zoological nomenclature but they form no part of it.] Systems of names applied to special disciplines of zoology, such as anatomy, ecology, or genetics, do not come within its scope.

(Comment : Revision of wording to include, rather than exclude, assemblages that are not or may not be taxonomic in character seems urgently needed on the grounds of long-accepted practice, utility, and logic. Does necessity require or wisdom impel excommunication from zoological nomenclature of many hundreds of what actually are " form-genera " and thousands of what actually are " form-species ", including " collective groups " recognized by parasitologists, named assemblages of conodonts, ammonoid aptychi, holothuroid sclerites, etc., and " work of animals " (acceptable under the Rules if published before 1931) ? Botanical nomenclature is not embarrassed by names (" form-genera ", " organ-genera ", " form-species ", " organ-species ") employed by palaeobotanists for parts of fossil plants. Surely it would be harmful, especially to palaeozoology, if the scope of zoological nomenclature should be limited to units for which taxonomic definition and relationships are presumed to be known. Moreover, some " form-genera " and " form-species " may actually comprise taxonomic groups. Probably least important nontaxonomic units are fossils consisting of the described and named " work of animals " (currently 244 genera, of which 176 published before 1931 are acceptable in zoological nomenclature and 68 published subsequent to 1930 are presently not accepted)).

Point (2)

Article 1, Section 1 (: 35, line 14) : What a name designates : A zoological name is the designation by which is known :

(a) Some taxonomic assemblage of actual [organisms] ANIMALS (TAXON) ;

(b) SOME ASSEMBLAGE OF ACTUAL ANIMALS BELONGING TO AN IMMATURE GROWTH STAGE (COLLECTIVE GROUP), NOT NECESSARILY CONSTITUTING A NATURAL TAXONOMIC UNIT ; AND

(c) SOME ASSEMBLAGE OF DISCRETE PARTS OR THE WORK OF ACTUAL ANIMALS (PARATAXON), NOT NECESSARILY CONSTITUTING A NATURAL TAXONOMIC UNIT.

EXPLANATION : A ZOOLOGICAL NAME IS APPLICABLE ONLY TO SPECIFIED ACTUAL OBJECTS, NOT TO A CONCEPT OF THEM (*cf* 1/3) ".

(Comment : In addition to names employed for taxa, those used to designate collective groups and parataxa must also be classed as zoological names, unless they are rejected from recognition by zoological Rules on the ground that lack of definability as taxonomic assemblages is judged to exclude them. To restrict zoological nomenclature to units classifiable as natural taxonomic assemblages is unnecessary and would be harmful to zoological science, because demands of practical utility cannot be met wholly in terms of units defined as taxa.)

Point (3)

Article 1, Section 3 (**: 36, line** 7) **:** Hypothetical designations : The name of a hypothetical concept shall have no status in zoological nomenclature.

Example : *Pithecanthropus* . . .

(i) Names based on the work of animals.—Notwithstanding the preceding paragraph, the description of the work of an animal, even though the latter is unknown, may serve to make available a name that was published prior to 1931 (*cf.* 6/3). SUCH NAMES PUBLISHED SUBSEQUENT TO 1930 ARE ELIGIBLE FOR RECOGNITION AS PARATAXA, INASMUCH AS THEY MAY HAVE DISTINCT VALUE IN PALAEOZOOLOGY.

(A) COLLECTIVE GROUPS AND PARATAXA : A COLLECTIVE GROUP OR PARATAXON, WHICH MAY OR MAY NOT COMPRISE A NATURAL TAXONOMIC ASSEMBLAGE, SHALL NOT BE CONSIDERED TO CONSTITUTE A HYPOTHETICAL CONCEPT ". (See J. Chester Bradley, *Bull. zool. Nomencl.* **15 : 244.**)

Point (4)

Article 1, Section 5 (**: 37, line 8**) **:** [Palaeontology] PALAEOZOOLOGY versus [neontology] NEOZOOLOGY.

Point (5)

Article 6, Section 1 (**: 48, line 9**) **:** How names become available : The name of a taxon, COLLECTIVE GROUP, OR PARATAXON shall have status in zoological nomenclature and shall be available for use if it meets the provisions of this Section.

Explanation : Whether an available name is the valid name of a taxon, COLLECTIVE GROUP, OR PARATAXON is determined by the provisions of Article 8. (Priority : The validity of names).

Comment : The suggested additions seem needful if those of RCM-1, RCM-2, etc., are accepted.)

Point (6)

Article 6, Section 1(i) (: 50, line 2) :

(i) Requirements : If the name was published prior to 1931, it must have been accompanied by a definition or description, or by an indication [(*cf.* Sect. 3)] ; THIS STIPULATION APPLIES EQUALLY TO TAXA, COLLECTIVE GROUPS, AND PARATAXA.

EXPLANATION : PRIOR TO ADOPTION OF THE PRESENT CODE, THE DESCRIPTION OF THE WORK OF AN ANIMAL, EVEN UNACCOMPANIED BY A DESCRIPTION OF THE ANIMAL, WAS CONSTRUED TO CONSTITUTE AN " INDICATION " THAT CONFERRED AVAILABILITY ON THE NAME FOR RECOGNITION AS A TAXON IF THE NAME WAS PUBLISHED BEFORE 1931. THUS, MANY KINDS OF GALL-INSECTS WERE VALIDLY NAMED BEFORE 1931 FROM THE GALLS THAT THEY PRODUCE, THE GALL-MAKERS BEING UNKNOWN, WHEREAS " PALAEOBUPRESTIS MAXIMA " WALKER, 1938 (DESCRIBED FROM CHANNELS, CUTTINGS, AND CASTINGS IN PETRIFIED TRIASSIC TREES, ASCRIBED TO ITS LARVAE) WAS NOT AN AVAILABLE NAME. CURRENTLY AND IN FUTURE, ALL SUCH NAMES BASED ON DESCRIPTION OF THE WORK OF AN ANIMAL, WHICH ITSELF IS UNKNOWN, ARE ACCEPTED WITHOUT REFERENCE TO THE DATE OF PUBLICATION AS AVAILABLE FOR PARATAXA.

(Comment : If reasons exist for retaining distinction in the status of names based on the work of animals, according to whether publication of the names was before 1931 or after 1930, they are not evident to me. The number of living forms affected is not known by me, but among fossils there are 176 pre-1931 genera in this category and at least 68 post-1930 genera.)

Point (7)

Article 6, Section 1(i) (: 50) :

(i)(a) PARATAXA : A NAME THAT MEETS REQUIREMENTS OF SECT. (1)(i) SHALL BE AVAILABLE AS THE NAME OF A PARATAXON IF IT IS BASED ON A SPECIMEN OR ASSEMBLAGE (' FORM-GENUS ' OR ' FORM-SPECIES ') CONSISTING OF :

(A) THE APTYCHUS OF AN AMMONITE OR APTYCHI OF AMMONITES ;

(B) A CONODONT OR GROUP OF CONODONTS ;

(C) A HOLOTHUROID SCLERITE OR GROUP OF SUCH SCLERITES ;

(D) THE WORK OF AN ANIMAL ; OR

(E) ANY EXPLICITLY DELIMITED CATEGORY OF DISCRETE PARTS OF ANIMALS DESIGNATED BY THE COMMISSION.

(Comment : This Section relative to availability of names published before 1931 for designation of parataxa is considered to be appropriate, especially subparagraph (e), and is not in conflict with procedure announced (*Bull. zool. Nomencl.* **15** : 14, 35) for dealing by the Commission with names of conodonts and ammonoid aptychi referred for decision in Documents 1/2 and 1/3.)

Point (8)

Article 6, Section 1(j) (: 50, line 7) :

(j) Requirements : If the name was published subsequently to 1930, it must be either (1) accompanied by a statement intended to give differentiating characters of its taxon, COLLECTIVE GROUP, OR PARATAXON, or (2) accompanied by . . .

(Comment : Addition of reference to collective groups and parataxa is desirable, unless these are excluded from zoological nomenclature. Among assemblages definable as parataxa, 150 or more generic units and at least 1,900 specific units based on description of discrete parts of animals (all fossils, chiefly conodonts) and 68 generic units based on description of the work of animals (all fossils) have been introduced since 1930.)

Point (9)

Article 6, Section 1(k) (: 51, line 7) :

(K)(a) PARATAXA : A NAME THAT MEETS REQUIREMENTS OF SECT. (1)(j) AND SECT. 1(k) SHALL BE AVAILABLE AS THE NAME OF A PARATAXON IF IT IS BASED ON A SPECIMEN OR ASSEMBLAGE BELONGING TO GROUPS PROVIDED FOR IN SECT. 1(i)(a).

(Comment : This provides for names published subsequently to 1930 and prior to 19... (*cf.* RCM-10).)

Point (10)

Article 6, Section 1(n) (: 52, line 1) :

(N)(a) PARATAXA : A NAME THAT MEETS REQUIREMENTS OF SECT. 1(j) AND SECT. 1(k) SHALL BE AVAILABLE AS THE NAME OF A PARATAXON BELONGING TO ANY GROUP OF ANIMALS IF AT THE TIME OF PUBLICATION THE AUTHOR EXPLICITLY DESIGNATES THE NAME AS THAT OF A PARATAXON, EXCEPT THAT NEW NAMES PUBLISHED AFTER 19... FOR A SPECIMEN OR ASSEMBLAGE BELONGING TO GROUPS PROVIDED FOR IN SECT. 1(i)(a) AUTOMATICALLY SHALL BE DESIGNATED AS PARATAXA.

(Comment : This provision is appropriate in allowing freedom to zoologists (especially palaeozoologists) without necessity of appeal to the Commission, which, however, should exercise control of classifying names published before 19... as parataxa.

Point (11)

Article 6, Section 3(3) (: 53, line 8) : Delete in entirety subsection (3) of Section 3, Article 6, together with citation of examples (*cf.* RCM-6).

Point (12)

Article 6, Section 5(e) (: 55, line 27) :

(e) Names based on part of an animal : A name is not made unavailable because it is based on :

(1) Any part of an animal, [except the aptychus of an ammonite]

(2) any stage in the life-history of an animal,

(3) one sex of an animal,

(4) any of dissimilar generations of an animal,

(5) any form of a polymorphic animal.

Such a name MAY BE APPLICABLE TO A COLLECTIVE GROUP OR PARATAXON AS CIRCUMSTANCES INDICATE AND shall compete in synonymy with other similar names, as well as those for the entire [species] TAXON, or those bestowed on the stage, sex, or form more usually used as the basis of a name, EXCEPT THAT NAMES ASSIGNED TO PARATAXA SHALL COMPETE IN SYNONYMY ONLY WITH THOSE OF OTHER PARATAXA (*cf.* 8/2, b).

(Comment : Provisions of this Section are construed to relate to the availability of names for taxa, as well as those suitable for recognition as collective groups and parataxa, according to circumstances, but names accepted for parataxa, being secondary and subordinate to those for taxa, should not compete with them in synonymy but only in homonymy (*cf.* RCM-14 on validity of parataxa).)

Point (13)

Article 8, Foreword (: 69, line 29) : Foreword : Among the competing available names for a taxon (*cf.* the Rules of Availability, Article 6) only one can be the valid name in given taxonomic circumstances. Usually, but not always, this is determined by the Principle of Priority, which holds that precedence in time establishes precedence in right (*cf.* Glossary). The provisions of this Article regulate the selection of the valid name. WHEREVER THE WORD " TAXON " IS EMPLOYED IN THIS ARTICLE, IT SHOULD BE UNDERSTOOD THAT THE PROVISION REFERRING TO IT APPLIES EQUALLY TO A COLLECTIVE GROUP OR PARATAXON, EXCEPT WHERE INAPPROPRIATE OR DISTINCTLY EXCLUDED BY THE PURPORT OF THE PROVISION.

(Comment : *Cf.* J. Chester Bradley (*Bull. zool. Nomencl.* **15** : 244) ; insertion of suggested addition, referring to both collective groups and parataxa, seems preferable here rather than at end of 8/2b.)

Point (14)

Article 8, Section 2(b) (: 71, line 11) :

(b) Names based on any part or form of an animal, or on its work : The Principle of Priority shall obtain and consequently the oldest available name shall be retained :

(1) When any part of an animal is named before the animal itself, EXCEPT FOR NAMES ACCEPTED AS PARATAXA (*cf.* 6/5, 14/2A),

(2) when any stage . . .

(6) prior to 1931, when the work of an animal is named before the animal itself, EXCEPT FOR NAMES ACCEPTED AS PARATAXA (*cf.* 6/5, 14/2A).

Point (15)

Article 10, Section 2(b) (: 85, line 17) :

(b) The work of animals : A taxonomist may no longer validly base the description of a new species or [lower] OTHER taxon solely upon the work of an animal (*cf.* [6/3,] 6/1), ALTHOUGH HE MAY INTRODUCE A NEW NAME OR NAMES FOR PARATAXA BASED ON SUCH DESCRIPTION(S) (*cf.* 14/2A).

(Comment : Although very good reasons can be advanced for opposing recognition of taxa of animals, living or extinct, on the basis of their works, these lack force if the names (already 244 nominal genera and considerably larger number of described species) are designated as parataxa. The importance of providing for admission of such parataxa in zoological nomenclature chiefly concerns palaeoecological aspects of palaeozoology. This does not apply to rejected nominal genera, including 62 judged not to represent work of animals and 89 classed as unrecognizable.)

Point (16)

Article 14, Foreword (: 100, line 3) : Foreword : Whether a taxon of this category . . . by those whose judgment concurs. WHEREVER THE WORD " TAXON " IS EMPLOYED IN THIS ARTICLE, IT SHOULD BE UNDERSTOOD THAT THE PROVISION REFERRING TO IT APPLIES EQUALLY TO A COLLECTIVE GROUP OR PARATAXON, EXCEPT WHERE INAPPROPRIATE OR DISTINCTLY EXCLUDED BY THE PURPORT OF THE PROVISION.

(Comment : *Cf.* J. Chester Bradley (*Bull. zool. Nomencl.* **15** : 244).)

Point (17)

Article 14, Section 2 (: 101, line 12) : Section 2. Collective groups. Certain [biological] ZOOLOGICAL groups, PREDOMINANTLY not taxonomic in character, that have been proposed distinctly as collective groups, not as systematic units, may be treated [for convenience] as if they were genera, but they require no [type-species] GENERITYPES [and their names do not enter into zoological nomenclature].

(Comment : *Cf.* RCM-1.)

Point (18)

Article 14, Section 2 (: 101) : SECTION 2(a) PARATAXA. CERTAIN ASSEMBLAGES DESIGNATED AS PARATAXA, PREDOMINANTLY NONTAXONOMIC IN CHARACTER, COMPRISING (A) DISCRETE PARTS OF ANIMALS DISTINGUISHED BY THEIR MORPHOLOGICAL RESEMBLANCES TO ONE ANOTHER (SO-CALLED " FORM-GENERA ") AND (B) TRACES REPRESENTING THE WORK OF ANIMALS MAY BE TREATED AS IF THEY WERE TAXA, SUCH ASSEMBLAGES CORRESPONDING TO GENERA BEING WITH OR WITHOUT GENERITYPES.

(Comment : Seemingly, such a Section should be incorporated in this Article of the Code, unless provision for parataxa is rejected.)

Point (19)

Article 15 (: 111) : SECTION 9. PARATAXA. THE PROVISIONS OF SECTION 2(a) OF ARTICLE 14 AS APPLIED TO ASSEMBLAGES OF GENERIC AND SUBGENERIC RANK, WITH APPROPRIATE MODIFICATION IN SCOPE (AS FOR SO-CALLED " FORM SPECIES " OF DISCRETE PARTS OF ANIMALS AND OF OBJECTS COMPRISING THE WORK OF ANIMALS) SHALL BE APPLICABLE EQUALLY TO ASSEMBLAGES TREATED AS SPECIES AND SUBSPECIES.

Point (20)

Article 19, Foreword (: 120) : Because the earliest . . . of its original publication. WHEREVER THE WORDS " NOMINAL GENUS OR SUBGENUS ", OR " NOMINAL GENERA " ARE EMPLOYED IN THIS ARTICLE, THEY SHALL BE UNDERSTOOD EQUALLY TO APPLY TO PARATAXA, EXCEPT WHERE INAPPROPRIATE OR DISTINCTLY EXCLUDED BY THE PURPORT OF THE PROVISION.

Point (21)

Glossary (: 279) : Suggested additions to Glossary :

NOMEN CORRECTUM (NOMINA CORRECTA pl.). Correct name, most commonly used for notation of emended form of incorrectly published family-group name (as " Komaspididae ". NOM. CORRECT. Henningsmoen, 1958, PRO " Glyptaspidae " Kobayashi, 1935 ; " Ptychopariidae ", NOM. CORRECT. Richter, 1932, PRO " Ptychoparidae " Matthew, 1887 ; etc.).

NOMEN TRANSLATUM (NOMINA TRANSLATA pl.). Transferred name, commonly used to record assignment of family-group taxa to rank other than originally published (as Superfamily " Illaenacea " Hawle & Corda, 1847, NOM. TRANSL. Jaanusson, 1957, EX " Illaenides " Hawle & Corda, 1849, = " Illaenidae " Hawle & Corda, NOM. CORRECT., Angelin, 1954).

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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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CASE No. 40

DRAFT " REGLES ", ARTICLE 28, SECTION 11(e) (AGREEMENT OF SPECIFIC NAMES IN GENDER WITH GENERIC NAMES)

(Commission Reference : Z.N.(S.) 1345)

PURCHASED
-1 JUN 1958

DOCUMENT 40/1

Objection to grant of exceptions in the application of gender Rules

Communication by Professor Dr. **K. FRIEDERICKS** and
eight other German zoologists

(Letter received on 9th April 1958)

Ich beehre mich, die folgende Erklärung zu Ihrer Kenntnis zu bringen :

Ich protestiere heftig gegen die geplante Fassung des Artikel 14 der Nomenklaturregeln, wonach das Geschlecht des Speziesnamens nicht mit dem des Gattungsnamens in Ubereinstimmung gebracht werden soll, wenn der Gattungsname wechselt. Diese Bestimmung wäre eine Barbarei und läuft einem gesunden Sprachempfinden zuwider. Es mag gewisse opportunistische Gründe für die vorgeschlagene Fassung geben, besonders zu Gunsten derjenigen, welche nicht in der Lage sind, im einzelnen Fall das Geschlecht des Speziesnamens zu entscheiden. Aber diese sollen sich von denen informieren lassen, die solche Fragen entscheiden können bezw. nomenklatorische Kataloge zu Rate ziehen, die zu diesem Zweck (und auch mit Hinweisen auf die richtige Betonung jedes Wortes) geschaffen werden müssen. Wir können nicht ungestraft die Grundlagen unsere geistigen Entwicklung ausser acht lassen. Es ist wahr : Die Anhäufung differenzierten Wissens zwingt zu einer gewissen Nachsicht. Aber jene Regel geht zu weit. Es gibt Informationsquellen.

Ich würde jener Bestimmung niemals folgen und bin sicher, dass auch viele andere dies mit ihrem sprachlichen Gewissen nicht vereinigen könnten.

Dr. K. FRIEDERICKS
emer. o. Professor der Zoologie,
Ehrenvorsitzender der Deut. Gesellschaft für angewandte Entomologie,
Ehrenmitglied der American Association of economic entomologists,
Mitglied der Deutschen Akademie der Naturforscher, und
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Institut für Pflanzenkrankheiter, Geisenheim a/Rh.

Prof. Dr. F. STELLWAAG

Translation furnished by Professor Friedericks and his colleagues

"I have to honor to bring to your knowledge the following declaration :

"I protest strongly against the planned conception of the Article 14 of the rules of nomenclature, following to which the gender of the species name not shall be squared with the generic name, if the genus name changes. This rule would be a barbarism and is contrary to a sound linguistic instinct and thus unnatural. There may be some opportunistic reasons for the proposed con-

ception, especially in favour of those which in the single case are not able to decide themselves the sex of the species name. These however may ask for information people which can decide such question, resp. they may consult nomenclatorial catalogues which for this purpose (and with indications of the right accentuation of every name) have to be written. We cannot unpunished despise the bases of our spiritual development. Who falsely speaks and writes, thinks falsely. It's true : The accumulation of differentiated science enforces to a certain indulgence. But that ordinance goes too far. There are sources of information.

"I never would follow to that rule, and I am sure that many others too cannot conform it with their linguistic conscience.'"

Note by the Secretary :

The representations submitted in the immediately preceding communication (Document 40/1) are not fully understood. The provision enshrined in Article 14 of the existing Règles by which it is provided that an adjectival specific name is to be cited in grammatical agreement with the name of the genus to which the species concerned is assigned has been reproduced in Section 13(1) of Article 28 of the Draft Règles (1957, *Bull. zool. Nomencl.* **14** : 221). The proposal relating to the possible grant of exceptions which appears in Section 11(e) of the same Article has been inserted by the compiler for the purposes of discussion, and it is assumed that it is this suggested provision that Professor Friedericks and his colleagues object to. F.H., 9th May 1958.

CASE No. 41

DRAFT " REGLES ", ARTICLE 20 (PROVISIONS RELATING TO NEOTYPES)

(Commission Reference : Z.N.(S.) 1337)

DOCUMENT 41/1

Proposed modification of existing provisions relating to the establishment of neotypes

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Enclosure to a letter dated 20th March 1958)

The Draft Code, Article 20, Section 5 (b) includes, at the suggestion of the late Dr. Karl P. Schmidt, a paragraph not authorised by the Copenhagen Congress setting out the Commission's powers in regard to establishing neotypes (*cf.* D.24/1, item 121).

2. The Copenhagen Decisions detailed a somewhat lengthy procedure for establishing neotypes, which have been embodied in the Draft Code as Article 20, Sections 4–7. In point of fact, since the recognition of the category neotype in Copenhagen in 1953, not one application has been published in the *Bulletin* in accordance with the Copenhagen procedure. On the contrary, the Commission has been requested to establish neotypes by use of its Plenary Powers, and to date a number of such neotypes have been established in this way. The advantage of establishing neotypes by use of the Plenary Powers is that an immediate and final decision is reached, whereas the Copenhagen procedure would demand a waiting period of five years after publication. During this period, it would only be tentatively accepted, and would be liable to challenge. The disadvantage of using the Plenary Powers for this purpose is that the safeguards invented at Copenhagen to prevent abuse are partly or completely

dispensed with, and the period during which objection can be lodged is reduced to a minimum of six months. It is in consequence of considerations such as these that I have felt it my duty as a Commissioner to vote against each and every proposal that a neotype should be established by Plenary Powers. That my opinion is not shared by other Commissioners is quite evident, however, as I have often been alone in my opposition.

3. Recently Dr. D. V. Ager has proposed use of the Plenary Powers in establishing a neotype for the species *Terebratula lineata* Young & Bird (*Bull. zool. Nomencl.* **13** : 251—253) and I note that in this case Professor J. C. Bradley has entered a general objection against the Commission being asked to confirm neotypes by Plenary Powers.

4. In view of the considerations set out above, I wish to propose a modification in the paragraph added to the Draft Code at the suggestion of Dr. Karl P. Schmidt, a modification which, if accepted, will give a clear direction to the Commission as to the desire of the Congress in this matter. The revised wording that I propose for this paragraph of the Code is as follows :—

> **Action by the Commission :** Acting under its Plenary Powers in the interest of stability and uniformity the Commission may either :
>
> (i) designate a neotype that, although it does not accord with all of the provisions of Section 5 (a), shall nevertheless be granted the status of a designated neotype as set out in Section 5(c) ; or
>
> (ii) establish a neotype that, although it does not accord with all the above provisions, shall not be liable to the challenge procedure set out in Section 5(c), (d) and (e), but shall be granted the same status as a neotype validated according to Section 5(e).

DOCUMENT 41/2

Comment on the proposals submitted by Karl P. Schmidt and P. C. Sylvester-Bradley for the inclusion in the " Règles " of provisions expressly authorising use by the Commission of its Plenary Powers to approve neotypes in certain cases

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 25th March 1958)

I should like to offer certain comments on the proposal which on the advice of the late Dr. Karl P. Schmidt (*Chicago Natural History Museum, Chicago, Illinois, U.S.A.*)[1] Professor J. Chester Bradley has embodied in Article 20, Section 5(b) that there should be included in the *Règles* a provision formally placing on record that, where the Commission thinks it proper in the interests of stability and universality in nomenclature, it may use its Plenary Powers to approve or validate a neotype that does not conform with all the detailed provisions laid down under the notification-and-challenge procedure. More recently Mr. P. C. Sylvester-Bradley has submitted a modified proposal on the same lines.[2]

2. I fully share the majority view of those present at the Copenhagen Congress that neotypes should be designated only sparingly and should be confined to cases where an officially approved neotype is necessary in the interests of nomenclatorial stability. I must say, however, that I very much doubt whether the " notification-and-challenge " devised at Copenhagen provides a satisfactory or even workable method for providing a valid basis for a neotype. In most cases where a neotype is really required, the delay of five years imposed under the " notification-and-challenge " would be extremely prejudicial to the interests of stability in the nomenclature of the group concerned. Moreover, the limited nature of the information, the supply of which is prescribed under that procedure is such that, if during the five-year period, objection were to be taken to the neotype in question and it became necessary therefore for the matter to be considered by the Commission in detail, a considerable further period would inevitably elapse while the required information was being collected and placed before, and considered by, the Commission. In my view,

---

[1] See 1957, *Bull. zool. Nomencl.* 14 : 148.

[2] See Document 41/1.

therefore the procedure under consideration is so dilatory in character as to be open to strong objection from the point of view of any worker anxious to promote stability in his own group by means of the neotype method.

3. In several important cases which have come before the Commission since the Copenhagen Congress the Plenary Powers have been used to validate an admittedly invalid neotype, that being the only method by which a valid basis for the continued use of the name concerned could be assured. Among the first of the cases of this kind was that of the nominal species *Coluber sirtalis* Linnaeus, 1758, for which in *Opinion* 385 the Commission used its Plenary Powers to validate the designation as the neotype of a specimen of the Eastern Garter Snake of North America. This action secured the maintenance of this name for this well-known snake and was in fact the only action which could have achieved that end, for the " notification-and-challenge " could not have done so, since, as specialists were agreed, the above name was originally given by Linnaeus not to the Eastern Garter Snake but to the Eastern Ribbon Snake.

4. It was in fact the above case—on which the sole negative vote cast was that of Mr. Sylvester-Bradley—which prompted Dr. Schmidt to suggest the addition to the *Règles* of the provision now embodied in Section 5(b) of Article 20 of Professor Bradley's Draft of the *Règles* giving express authority to the Commission to use its Plenary Powers in such cases. I would certainly support this proposal or any appropriate modification of it if I felt satisfied that a provision of this kind was necessary or would be helpful. I must say, however, that I feel that proposals of this kind overlook the essential nature of the Plenary Powers which, as their name implies, are completely unfettered, provided that in the words of the Preamble added to the *Règles* by the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 22) they are employed to promote " the primary purpose of the *Règles* ", namely, to ensure that the names given to animals " shall be both stable and universally accepted ".

5. I would therefore urge the Congress to consider carefully whether it would not be better to omit the proposed provision, notwithstanding its excellent intention and the merits which it would undoubtedly possess if it could be judged in isolation from other parts of the *Règles*. I urge this because every time that an unnecessary provision of this kind is inserted in the *Règles*, the effect can only be to throw doubt upon the generality of the " plenary " character of the " Plenary Powers " and to lend support to the idea that the use of the " Plenary Powers " would be appropriate only in relation to portions of the *Règles* to which were attached provisions—such as those now under consideration—which expressly authorised the use of those Powers.

DOCUMENT 41/3

Proposals for the amendment and correction of the Draft " Règles " concerning the establishment of neotypes (Article 20)

By **CYRIL F. DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Enclosure to letter dated 2nd April 1958)

Introduction

Neotypes were first recognized officially at Copenhagen in 1953. The provisions relative thereto are to be found in the *Copenhagen Decisions on Zoological Nomenclature* edited by Francis Hemming (1953) part 2, pages 28–32, paragraphs 32–42. While it would be convenient in connection with the study of this matter to have those provisions in full before the reader, they are so lengthy that it is believed best to quote only those parts that are relevant to the present paper. These read as follows :

> 35. Conditions for the establishment of neotypes : The Colloquium recommends that there should be inserted in the *Règles* a provision defining as follows the conditions requisite for the establishment of neotypes :—
>
> > Where the provisions prescribed as to the purpose for which neotypes may be established are satisfied, an author may designate a neotype, provided :—
> >
> > . . .
> >
> > (5) that evidence is provided that the specimen designated as the neotype is consistent :—
> >
> > . . .
> >
> > (b) with action taken by previous revisers ;
> >
> > . . . .
>
> 36. " Recommandation " to authors, before designating neotypes, to satisfy themselves that this would not arouse objections : The Colloquium recommends that there should be inserted in the *Règles* a *Recommandation*

that, before an author designates a neotype, he should satisfy himself that such a designation would not arouse objections from the majority of fellow-workers in the same group.

The Draft " Règles "

The draft *Règles*, insofar as they deal with these subjects, will be found in Article 20, Sections 4–7 (1957, *Bull. zool. Nomencl.* **14** : 145–151) and need not be quoted in full because they will be before the members of the Colloquium when the questions hereinafter raised will be decided.

In these *Règles* Professor Bradley has included in Sections 4–7 seven " Discussions " concerning neotypes. They will be found on the following pages : 145, lines 11–14, 24–25 ; 147, lines 18–22 ; 148, line 16 ; 149, lines 16–20 ; 150, lines 9–15 ; 151, lines 7–9.

The author of this paper approves nearly all the recommendations contained in the aforementioned " Discussions ". However, in the writer's opinion there are still some objectionable provisions in the draft of Article 20, Sections 4–7. These cannot all be charged against the drafter of the *Règles* but rather to the action taken at Copenhagen which Professor Bradley naturally felt obliged to follow.

Three objectionable provisions contained in the draft " Règles "

The first objectionable provision of Article 20, is to the last clause of Section 5 (v) entitled " Suitability ". This paragraph, insofar as material, requires that " The author must provide evidence that the designated neotype is consistent . . . (2) with action taken by the first reviser, possibly modified by successive revisions ". As we shall see later when a neotype is properly designated the facts may show that the works of the first reviser and all subsequent revisers were erroneous. The final paragraph of subdivision (v) should be stricken out.

The next objectionable provision is " Recommendation " 12, which appears under Section 5 (xi). The action taken at Copenhagen on this subject is quoted above. This provision provides that, " . . . Before designating a neotype a taxonomist should satisfy himself that such a designation would not arouse objections from the majority of workers, if any, in the group involved ". Such a provision appears to the writer to be impractical, unduly restrictive upon an author's freedom of action, and entirely beyond any legitimate need. If followed, it would involve a plebiscite each time it were proposed to designate a neotype, the counting of noses, where it could well be found that the minority in favour of the designation was better qualified to solve the problem than the majority against it. What then would an author do, who could easily have wasted a year in correspondence, about designating a neotype ? The provision should be stricken out as unnecessary and impracticable.

The final objectionable provision is to be found in Section 5(a)[(iv)] which is contained in brackets to show that it is not based upon anything done at Copenhagen but is suggested as new matter and reads, in so far as material : " [. . . A neotype that replaces a lost holotype or lectotype must be chosen from existing type material, if there is any, . . .]." This language must be a *lapsus* on the part of the drafter, because a type chosen from existing type material would not be a neotype but a lectotype. It would seem best to strike out this entire paragraph as not being based upon any action heretofore taken and at least improperly included under the heading " Neotypes ".

Two recent cases involving the establishment of neotypes wherein the authors did not comply with the rules and recommendations adopted at Copenhagen

In this inquiry the present author restricts himself to the literature concerning Palearctic Rhopalocera, and even then he may not have seen all designations of neotypes that have been made since 1953, but two important cases have come to his attention. No criticism of the five authors hereinafter mentioned for designating neotypes is intended, but attention is called thereto to show that a rule requiring designated neotypes to be consistent with the action taken by previous revisers and a recommendation requiring an author to consult other taxonomists before designating a neotype are unnecessary, impractical and unduly burdensome. If the present author had been in the place of these five authors, he would have done exactly as they did, because it was entirely unnecessary to consult anyone concerning the designation of the neotypes and impossible to follow in all cases any first or other reviser in the circumstances therein revealed. These provisions of the *Règles* will seldom be complied with, hence it is best to omit them entirely.

1. The case of " Papilio adippe "

To understand the proceedings in the *Papilio adippe* case it is important to follow the chronological sequence of the events that lead up to the designation of a neotype. On 29th November 1949 the original application to solve the problem of the proper scientific name to be used for the " High Brown Fritillary " was filed with the Commission by Hemming, Riley, and Verity. On 11th May 1950 a supporting application was filed by Grey, Klots, and the present author. In 1953 the Copenhagen Congress for the first time recognized neotypes officially and provided rules and recommendations for their establishment. The wording of the action of that Congress, in so far as material, appears above. On 26th June 1954 the Secretary of the Commission declared that the Commission had acted favourably on the application, thus fixing the name *Papilio adippe* [Denis & Schiffermüller], 1775 as the name to be used for the " High Brown

Fritillary ". In May 1955 the original applicants filed with the Commission a designation of a neotype for *Papilio adippe.*

There is no evidence in the published report of this case (*Opinion* 501) that the applicants consulted any taxonomist concerning the designation of this neotype. In fact it is quite clear that they did not do so in spite of the Copenhagen Decision now included in Aeticle 20, Section 5 (xi) " Recommendation " 12. Furthermore there is no showing that these authors supplied any " . . . evidence that the designated neotype [was] consistent . . . (2) with action taken by the first reviser, possibly modified by successive revisions ". In fact their action was contrary to the action taken by the first reviser. modified by successive revisers as will now appear.

Just who was the " first reviser " of *Papilio adippe* is not easy to determine, as is so often the case when searching for that elusive individual. Perhaps it is unnecessary to decide that question because the point is that no reviser was followed by Hemming, Riley, and Verity and no revision was entirely consistent with any other revision. In any event one of the applicants (Verity) was certainly a reviser in 1913 when he discovered that the name *Papilio adippe* Linnaeus, 1761 could not be used for the " High Brown Fritillary " and proposed the name *Argynnis esperi* for that species. He was also a reviser in 1929 when he reversed his previous action and used the name *Argynnis phryxa* (Bergstrasser), 1783 for the species. In 1930 he reversed himself again and claimed that the correct name was *Papilio adippe* Rottemburg, 1775, but six years later in 1936 he added Schiffermüller to the authorship.

It appears in *Opinion* 501 (: 24) that in their original application to the Commission twenty-one specialists were consulted respecting the solution of this problem, and while not using the word " neotype ", not then officially recognized, the Commission was requested (p. 19) :

> " (c) to direct that the specific trivial name *adippe* [Denis & Schiffermüller], 1775, as published in the combination *Papilio adippe*, as validated in (b) (i) above, be applied to the species figured under that name by Esper in 1777 as fig. 1 on pl. 18 of the work entitled *Die Schmetterlinge in Abbildungen nach der Natur.*" :

Later realizing that the Esper specimen selected as a criterion of the species did not come from the type locality of *Papilio adippe* [Denis & Schiffermüller] as that name was proposed to be used, a specimen taken in the neighbourhood of Vienna, was designated the neotype. It does not appear from this supplemental application that any specialist was consulted about the proposed neotype.

2. The case of " Papilio nise "

The second case is to be found in a paper by Klots and Heineman (1957) concerning the identity of *Papilio nise* Cramer, 1779, [1776], wherein a neotype was designated for this nominal species on pages 212–213. As in the previous case the authors say not a word about having consulted any specialists before designating the neotype. If they had it is a question when, if ever, their paper would have appeared in print, because so many taxonomists have written on this subject that there could well have been differences of opinion concerning the designation of a neotype. Also these authors did not follow the first or any other reviser. At least fourteen authors are cited on pages 207 and 208 of their paper in which they admit " . . . that there has been a great lack of uniformity in the use of the name *nise* ever since Boisduval in 1836 first cast doubt upon the accuracy of Cramer's figure and questioned the occurrence of a concolorous species in Jamaica ". In the circumstances disclosed in this case, it was impossible to follow any previous reviser and attain the correct result.

Some suggestions concerning neotypes submitted by Mr. Sabrosky for publication in Volume 15 of the " Bulletin of Zoological Nomenclature "

Mr. Curtis W. Sabrosky has kindly furnished the author with a copy of a paper entitled " Comments on the draft of the Code " which will appear doubtless in Volume 15 of the *Bulletin*. The suggestions therein contained are listed under the new Articles and Sections of the draft *Règles* and thus are easily found. The present author disapproves of the suggestions listed under "Article 20, Section 4 (General rules for neotypes) " and suggests the adoption of Professor Bradley's language. This position evidences a struggle between those who believe in strict and those who favour liberal interpretations of the neotype concept. The present author favours the latter interpretation as found in the draft *Règles*, which in his opinion, express the spirit of Copenhagen, if not the actual language. Indeed, he sees no harm in treating neotypes more liberally than has been done.

Conclusions

As we have seen, the rules respecting neotypes adopted at Copenhagen are entirely too strict and in some respects impracticable. The present author, therefore, urges that—

First, the language proposed in Professor Bradley's draft of the *Règles* (Article 20, Sections 4–7) and in brackets in Section 4(a) be adopted, and

Secondly, that Section 5(a) [(iv)] and (v) (2) be omitted and that " Recommendation " 12 be eliminated. In brief, it is proposed that all of Professor Bradley's suggestions as found in his " Discussions " be approved, except as above stated. If such action is taken, the rules respecting neotypes will still be sufficiently strict but they will at least be workable, and a majority of taxonomists will endeavour to comply with them.

Literature cited

Hemming, Francis (ed.), 1953. *Copenhagen Decisions on Zoological Nomenclature. Additions to, and modifications of, the " Règles Internationales de la Nomenclature Zoologique ". Approved and adopted by the Fourteenth International Congress of Zoology, Copenhagen, August* 1953. London : International Trust for Zoological Nomenclature, xxx + 136 pp., 2 pls.

Hemming, Francis, Riley, Norman Denbigh & Verity, Roger, 1958. " Designation of a neotype for the nominal species ' *Papilio adippe* ' [Denis & Schiffermüller], 1775 (Class Insecta, Order Lepidoptera) and request that the International Commission on Zoological Nomenclature should give a direction under the Plenary Powers that the above nominal species be interpreted by the foregoing neotype instead of (as previously proposed) by reference to a previously published figure and a specified type locality. Application supplementary to an application submitted in 1949 for the validation and interpretation under the Plenary Powers of the name " *Papilio adippe* " [Denis & Schiffermüller], 1775." *Opinions and Declarations rendered by the International Commission on Zoological Nomenclature*, **18** : 55–64, pls. 1–3

Klots, Alexander Barrett & Heineman, Bernard, 1957. " The identity of *Papilio nise* Cramer, 1775 (Lepidoptera : Pieridae) and a neotype designation for this nominal species." *Proc. R. ent. Soc. Lond.* (B) **26** : 206–213, pl. 1 (col.)

Verity, Roger, 1913. " Revision of the Linnean types of Palaearctic Rhopalocera." *J. linn. Soc. Lond.* (Zool.) **32** : 173–191

——, 1929. " Races de l'Europe occidentale de l'*Argynnis phryxa* Bergstr. qu'on nomme, á tort, *adippe* L. [Lep. Nymphalidae]." *Bull. Soc. ent. France* **29** : 277–280

——, 1930. "According to the rules of nomenclature the name of *Argynnis adippe* is of Rottemburg (*nec* L.), and that of *Melitaea dictynna*, Esp., must be replaced by *diamina*, Lang." *Ent. Rec.* **42** : 149–152

——, 1934–1936. " The lowland races of butterflies of the Upper Rhone Valley." *Ibid.* (suppls.) : 1934, **46** : (1–40) ; 1935, **47** : (41–76) ; 1936, **48** : (77–90)

DOCUMENT 41/4

Comments on certain points relating to the procedure for the establishment of neotypes raised in a paper dated 2nd April 1958 submitted by C. F. dos Passos

By **FRANCIS HEMMING,** C.M.G., C.B.E. (*London*)

(Note dated 10th April 1958)

I had not proposed to offer to the Congress any further comments[1] on the Rules relating to the establishment of neotypes adopted by the Copenhagen Congress and the amplified version of those Rules included by Professor J. Chester Bradley in Article 20 of his draft of the English text of the *Règles*, but in view of the paper on this subject recently submitted by Mr. Cyril F. dos Passos[2] I feel bound to submit the following observations.

2. In his paper Mr. dos Passos recommends, *inter alia* (1) that the provision in Article 20, Section 5(a)(5)(2) (requiring that neotypes should be in harmony with any action taken by a First Reviser) should be deleted and (2) that Recommendation 12 (enjoining consultations with other specialists before neotypes are established) should also be omitted from the *Règles.* I feel it necessary to record my objection to both of the foregoing proposals and to affirm my support for the proposals submitted in Professor Bradley's Draft.

3. It seems to me very desirable that under what may be termed the " normal neotype procedure " with which we are here concerned it should be provided that neotypes when established should be in harmony with any action validly taken by First Revisers. From time to time however the observance of this principle, far from promoting stability in nomenclature, would have the opposite result. Whether or not a case fell in this special class is not however a matter which could appropriately be left to the judgement of individual specialists, for by reason of the nature of the issues involved it would be

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[1] See Document 41/2.

[2] See Document 41/3.

impossible to ensure in any given case that all interested specialists would at all times take the same view on those issues. Accordingly, the reasonable course seems to be that action by previous First Revisers should be followed in choosing a specimen to be a neotype, but that, where the adoption of this principle would lead to name-changing and instability the case should be laid before the International Commission with a request for action under the Plenary Powers. It is an inherent feature of the form of procedure here suggested that the fullest possible information as to the wishes of specialists should be made available to the Commission before it takes action in such a case.

4. In his paper Mr. dos Passos cites as an example the case of the neotype for the nominal species *Papilio adippe* [Denis & Schiffermüller], 1775, recently provisionally designated by Mr. N. D. Riley, Dr. Roger Verity and myself, and later approved by the International Commission under its Plenary Powers. It is, I agree, an instructive case, but not in the sense suggested by Mr. dos Passos. As will be seen from the associated documents reproduced in the Commission's *Opinion* 501, this was a case where, in the opinion of the six applicants, the normal provisions of the *Règles* not only were incapable of providing a result in harmony with accustomed usage but could not even provide a definite result of any kind owing to the existence of older names treated by some specialists as senior subjective synonyms of recognisable names and by others as *nomina dubia*. It was for this reason that the applicants (who included Mr. dos Passos and myself) invited the Commission to use its Plenary Powers for the purpose of validating and interpretating the name *Papilio adippe* [Denis & Schiffermüller]. Exceptional efforts were made to obtain the views of specialists on these proposals and ultimately comments were obtained from twenty-one (21), or when account is taken of the applicants, of twenty-seven (27). It was on the basis of this very extensive canvass that the Commission took its decision on the major issues involved in this case. At the time when the foregoing proposals were submitted to the Commission the neotype concept had not been recognised by the International Congresses of Zoology and it was for this reason alone that in the application submitted the Commission was not asked to use its Plenary Powers to validate a neotype for the above species. The proposal which was then submitted—and which was the subject of the extensive canvass of opinion discussed above—was, however, substantially equivalent in substance, though not in form, to a request for the recognition of a neotype, and accordingly when the neotype concept was approved by the Copenhagen Congress, the form of the proposal was modified to conform with the neotype model in the supplementary application submitted by Mr. Riley, Dr. Verity and myself. The change so recommended to, and approved by, the Commission was purely formal and did not affect in any material respect the decision already taken by the Commission under its Plenary Powers.

CASE No. 42

DRAFT " RÈGLES ", ARTICLE 22, SECTION 5 : CITATION OF DATES WHEN GENERIC COMBINATION CHANGED

(Commission Reference : Z.N.(S.) 1344)

DOCUMENT 42/1

Article 22, Section 5(c)(i) and Section 6(b)

By **CYRIL F. DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Letter dated 14th April 1958)

I do not agree with the method of citing the dates in the examples given in the above Sections. Below are given both examples and the manner in which I believe the dates should be cited :—

Dibothriocephalus latus (Linnaeus, 1758) ; *D. latus* (Linnaeus), 1758

Limnotis nilotica (Savigny, 1820), Moquin Tandon, 1826 ; *L. nilotica* (Savigny), 1820, Moquin Tandon, 1826.

In new combinations the author's name only should appear in parentheses and not the date. In such circumstances the date remains unchanged and placing it in parentheses with the author's name is confusing, because sometimes a date goes in parentheses or brackets for special reasons.

DOCUMENT 42/2

Citation of dates when generic combinations are changed : support for the existing provision and objection to the proposal suggested by C. F. dos Passos

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 21st April 1958)

The present note is prompted by the proposal submitted by Mr. C. F. dos Passos in his letter of 14th April 1958 that, when a specific name is cited in combination with a generic name, other than that in which it was originally proposed, the name of the author but not the date of publication of the name should be cited in brackets (parentheses).

2. If this provision had been adopted by the Berlin Congress when in 1901 it approved the present *Règles*, there would have been much to be said in its favour on grounds of logic. But the Berlin Congress took a different view, including in the *Règles* a provision (Article 23) that, where a given specific name is cited in combination with a generic name different from that in combination with which it was cited when first published, brackets (parentheses) are to be placed round both the author's name and the date of publication of the specific name concerned.

3. The Berlin Rule has been in force now for nearly sixty years and names have been cited in accordance with its provisions on countless thousands of occasions. It seems to me therefore that no advantage—indeed, quite the contrary—would be served by making the change suggested by Mr. dos Passos.

DOCUMENT 1/60

(*continued from page* 760)

Status to be accorded under the Law of Homonymy to names for genera of " parataxa "

(Commission Reference : Z.N.(S.) 1056)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(copy of a letter dated 26th March 1958 addressed to P. C. Sylvester-Bradley (University of Sheffield))

Ever since the plan for the recognition in the *Règles* of the concept of the parataxon was put forward by Professor Raymond C. Moore and yourself, I have taken the view that, if palaeontologists engaged on certain types of work are of the opinion that the inclusion in the *Règles* of provisions on this subject would be of help to them, their wish should, if possible, be met, subject to the over-riding condition that, whatever form the scheme might take it should be such as would not cause embarrassment or inconvenience to zoologists in applying the existing system of zoological nomenclature in what you and Professor Moore termed the " whole-animal " field.

2. With this idea in mind I put forward for consideration in my letter to Professor Moore of 5th July 1957 the idea that it might be possible to devise for the naming of " part-animals " (parataxa) a system on the lines of that adopted for the naming of infra-subspecific forms (of " whole-animals ") by the Thirteenth International Congress of Zoology in Paris in 1948. As I explained in my letter to Professor Moore, the situation in regard to the naming of infra-subspecific forms resembled that arising in connection with the naming of parataxa, in that (1) some specialists wanted to see the introduction of a scheme, while others would find no practical use for such a scheme in their own work and (2) it was generally agreed that, if there were to be provisions in the *Règles* regulating the giving of names to infra-subspecific forms, that scheme must be such as would not interfere with—or impinge upon—the existing system for the naming of species and subspecies. To secure this end, it was decided by the Paris Congress that the *Règles* should provide for the

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[11] For the text of the letter here referred to see Annexe 1 to Document 1/16 (: 107-111).

existence of two independent systems, one for the naming of infra-subspecific forms, the other for the naming of species and subspecies, the only connection between the two systems being the provision of bridges by means of which a name given to the first of these classes of taxa could be moved over into the system governing the naming of the other class and *vice versa*.

3. The great merit of the scheme adopted in Paris lay in the fact that zoologists who were not concerned with infra-subspecific forms could safely ignore names given to such forms, since such names were excluded from consideration in connection with the names for species and subspecies, not only from the point of view of the Law of Priority but also from that of the Law of Homonymy. It would therefore have been of great advantage if it had been possible to devise for the naming of part-animals (parataxa) a parallel system which would have ensured that names so given did not impinge on—or get in the way of—names given to " whole-animal " taxa (i.e. to species and subspecies).

4. I realise now, however that a scheme of the kind discussed above could not be applied to the naming of parataxa because in this case it is desired to provide means for the naming of " genera " of parataxa as well as for the naming of " species " of parataxa. In these circumstances it appears to me to be essential that in any plan for the naming of parataxa it should be provided that generic names published for " genera " of parataxa should rank equally with generic names for the purpose of " whole-animal " taxonomy. No other system would, I believe, be practicable, for such names would certainly find their way into " Nomenclators " and similar works and it would lead to great confusion if some, but not all, generic names included in such works were to rank for the purpose of the Law of Homonymy and so invalidate the later use in " whole-animal " nomenclature of names consisting of the same words.

5. For the reasons set out above I therefore now withdraw the suggestion put forward in my letter of 5th July last that generic names published for parataxa should not rank for the purposes of the Law of Homonymy *vis-à-vis* names published for " whole-animal " genera.

DOCUMENT 1/61

A Proposal for Form-Taxa in Zoology

(Commission Reference : Z.N.(S.) 1056)

By **CURTIS W. SABROSKY**

(*Entomology Research Division, Agricultural Research Service, United States Department of Agriculture, Washington, D.C., U.S.A.*)

(Enclosure to a letter dated 27th March 1958)

The following plan is offered as an alternative to the Moore and Sylvester-Bradley proposal for parataxa (cf. *Bull. zool. Nomencl.*, **15** ; Case No. 1). The exact place or places in the draft Code have not been specified, because there must first be agreement in principle on what is to go into the Code. It may even be that a separate Article on Form-Taxa will be found desirable.

2. At the moment I see no practical advantage in distinguishing between Form-Genera and Organ-Genera, as does the Botanical Code. Their nomenclatural treatment, as nominal form-genera, would be the same under my proposal.

3. Names proposed for the work of animals are not included here because I take the view that all such names have been and should be accepted, although recommended against (*cf.* my comment on Article 6, Section 3 (3) of the Bradley Draft in my " Comments on the Draft of the Code ").

A Plan for Form-Taxa in Zoology

Form-genus : A form-genus (*seu* collective group) is an artificial taxon for grouping species represented only by dissociated parts or immature stages, that lack intrinsic or currently recognized evidence of natural affinities, but for which binominal nomenclature is desirable.

Examples : (a) Genera based on discrete fragments (all in paleozoology) : *Hindeodella* and *Prioniodus* in conodonts*, *Aptychus* and *Trigonellites* for the aptychi (opercula) of ammonites ; (b) genera based on immature stages (helminthology) : *Cercaria* and *Sparganum.*

Form-taxa higher than genus : Because form-genera are artificial conveniences for naming and handling species, they do not therefore lend themselves to grouping into natural higher categories. In large groups, however, with numerous form-genera already named, form-taxa of higher rank may be useful.

Application of Rules : The names of form-genera and higher form-taxa are subject to all Rules regulating names applied to natural taxa, except that they shall not compete with such names under the Law of Priority nor be available for use as the names of natural taxa. Names of form-taxa are coordinate with those of natural taxa for purposes of homonymy.

Form-type-species : According to established practice in each animal group concerned, a form-genus may or may not have a form-type-species. If one is used, it is only an artificial means for allocation of species to form-genera, or for determination of synonymy of form-genera among themselves. This use does not affect the status of the specific name as representing a natural species whose true identity and zoological affinity might eventually be determined.

Explanation : In zoological groups which employ form-genera, there are two kinds of situations : (a) Groups with only a few broad form-genera (e.g., *Cercaria*) which are " catch-alls " and do not need type-species ; and (b) groups with numerous, limited form-genera (e.g., *Hindeodella*, *Prioniodus*, etc. in conodonts) which were proposed before the adoption of the above plan, and in which form-type-species are necessary for proper assignment of species and of form-generic synonyms. Form-genera operate best, particularly in avoiding specific homonymy and in obviating the complications inherent in a system of type-species, when only one or a very few large genera are used in each zoological group. The generic name serves as a necessary half of a binomen rather than as a distinctive term *per se* ; because of its artificial nature, a form-genus need serve no other purpose.

The species in form-genera : The species described in form-genera are natural species, or treated as such. Their names are subject to all Rules regulating specific names, including both the Law of Priority and the Law of Homonymy.

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* Names for conodont and scolecodont assemblages (paleozoology) are to be considered as natural genera.

(1) **Limitation :** If a species which has functioned as a form-type-species in a form-genus is subsequently transferred to a natural genus, another species shall arbitrarily be selected to replace it as form-type-species, with proper consideration for maintaining stability and universality in the form-genus.

(2) **Limitation :** If zoological evidence indicates that a nominal species in a form-genus does not refer to a single species but from the nature of the material may include homologous parts of two or more species, specialists in that group would be justified in not applying the name to any natural taxon. Example : Names for aptychi of ammonites (Paleozoology).

Implementation : Specialists in each group shall propose to the Commission a list of nominal genera that are to be considered form-genera. The lists shall be published by the Commission, and a year waiting period allowed for protest. If a protest is received, the Commission shall decide. Names not protested during the prescribed period shall be placed on an " Official List of Form-Genera in Zoology ".

DOCUMENT 1/62

Comment on the Moore/Sylvester-Bradley " Parataxa " Plan

(Commission Reference : Z.N.(S.) 1056)

Statement furnished by TADEUSZ JACZEWSKI under
cover of a letter dated 25th March 1958

At a meeting of a group of Polish zoologists, the names of whom are annexed to the present paper, organised in Warszawa on March 14th 1958 by the Institute of Zoology, Polish Academy of Sciences, an account was given of the " Parataxa Plan " put forward by R. C. Moore and P. C. Sylvester-Bradley, of the development of discussion on this plan being published in the *Bulletin of Zoological Nomenclature*, and of the opinions expressed by several of the Polish zoologists interested. After discussing the foregoing, those present unanimously decided to declare themselves not in favour of the plan to introduce " parataxonomy " to neo-zoology, and to adopt a critical attitude to its introduction into paleozoology. The arguments put forward by the members of the meeting against the Moore/Sylvester-Bradley plan were as follows :—

1. Artificiality of the division of specimens examined into " whole animals ", " fragments ", or " stages " : A greater or lesser degree of fragmentariness is a feature not only of paleozoological, but also of neo-zoological material. Every preserved specimen is in a certain sense incomplete by reason of the changes taking place in it, which obliterate certain features exhibited by the living organism. In modern systematics, the concept of a " whole animal " includes not only the external morphology of the adult form, but also the macroscopic and microscopic internal morphology, including cytology, and even the ontogenesis of the animal, its physiology, ecology and ethology. In many cases the morphology or ecology of the earlier stages of development may have a higher taxonomic value than the morphology of the adult stage, which is often insufficient to enable a differential diagnosis of the species to be established. From this point of view, for instance, names of many species of insects, described solely on the basis of the external structure of the imagines, could equally well be accepted as names of parataxa, as names based only on the larval stages of parasites with an unknown cycle of development, or on the traces of feeding left by the larvae in plants. In order to distinguish between the many sibling species in the animal kingdom, not only their cycle of development and their ecological niche must be known, but often also a study of experimentally-reared populations and cytogenetic and biometric investigations based on population material are required. On this account even apparently complete specimens of animals are not as sure a basis for describing and identifying species as is often accepted. Since we have constantly to deal with fragmentary material, there is no necessity for its division into " less fragmentary " and " more fragmentary ", nor for the introduction of two separate systems of nomenclature for these artificially established categories.

2. Danger of strengthening the " purely-descriptive " trend in systematic zoology : Systematic zoology as a science, in addition to its function of describing and segregating heterogeneous and innumerable fragments of the structure and life of animals, performs the function of fitting together and elucidating these fragments, since only by means of an " entire " and multilateral approach to an animal is it possible correctly to distinguish and separate species, and discover their phylogenetic relationships. It is, however, essential to take into account the fact that a certain number of taxonomists not only content themselves with reaching that introductory function of the science, but even consider it as an end in itself, a certain influence being exercised here by their tendency to describe new forms under their own authorship. The rules of nomenclature in force are somewhat of a curb on these activities. On the other hand, there are grounds for fearing that the possibility of endowing unidentified fragments, stages or traces of animals with separate names will even further reduce the efforts made by many authors to elucidate these fragments, and discover their connection with defined species or taxonomic groups, and in this way contribute to a profusion of thoughtless descriptive labelling in zoology. Research in the same sphere of phenomena may be either of value or valueless to science depending on whether a search is made for the links between these and other phenomena, or whether they are treated as completely detached from other phenomena.

3. Danger of over-development of problems of nomenclature in comparison to those of taxonomy : The introduction of the system of " parataxonomy " independently of the taxonomic system, as though parallel to it, will bring about not only an influx of numerous names, which from the scientific point of view will be merely ballast, but also the separation of " parataxa " from taxa among names already in existence. Such " sifting " of " parataxa " may become the special occupation of systematists with formalistic tendencies, and may form a jumping-off ground for new pseudo-problems of nomenclature, which will obscure the proper problems of taxonomy and phylogenetics.

ANNEXE TO DOCUMENT 1/62

Members of the group of Polish zoologists who attended the meeting organised by the Institute of Zoology, Polish Academy of Sciences on 14th March 1958

Member's Name	**Speciality**
Wladyslaw Bazyluk	Entomology
Ryszard Bielawski	Entomology
Boleslaw Burakowski	Entomology
Zygmunt Fedorowicz	Theriology
Stanislaw Feliksiak	Malacology
Kazimierz Galewski	Entomology
Antoni Goljan	Entomology
Tadeusz Jaczewski	Entomology
Maria Jahilnicka	Hydrobiology
Maciej Mroczkowski	Entomology
Janusz Nast	Entomology
Jakub Tomasz Nowakowski	Entomology
Bohdan Pisarski	Entomology
Adolf Riedel	Malacology
Wlodzimierz Serafiński	Theriology
Henryk Szczepański	Entomology
Zbigniew Swirski	Ornithology
Teresa Zablocka	Ornithology

DOCUMENT 1/63

ALTERNATIVE METHODS FOR REGULATING DUAL NOMENCLATURES

(Commission Reference : Z.N.(S.) 1056)

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Enclosure to a letter dated 7th April 1958)

At a recent joint meeting of the Palaeontographical Society and the Palaeontological Association held in London specially to consider the Parataxa Plan, a large majority voted in favour of requesting the International Congress to provide some means of regulating " dual nomenclatures " (D.1/53, Resolutions 1 and 2). A majority (but a small one) also felt that the Parataxa Plan provided a suitable means for such a purpose, but a minority of 14 apparently felt that some alternative scheme should be sought. No such alternatives were put forward at the meeting, but Mr. N. F. Hughes suggested that the London Congress would do well to study the plural nomenclatures of palaeobotany before coming to a conclusion with regard to the Parataxa Plan, and I reported that I had been informed by Mr. Curtis W. Sabrosky that our Washington colleagues have been thinking along the same lines. The present paper is an attempt both to summarise the regulations introduced into the International Code of Botanical Nomenclature for dealing with Organ Genera and Form Genera, and to compare them with the proposals now placed before the London Colloquium for dealing with Parataxa and Collective Groups. Mr. Sabrosky's proposals concerning Form Taxa (as set out in D.1/61) are also discussed below.

2. Form Genera have been used in palaeobotany since 1828. The following Rules, abstracted from Appendix II (" Special provisions concerning fossil plants ") of the 1956 edition of the *International Code of Botanical Nomenclature* (*Regnum Vegetabile* **8** : 55), pertain to the categories Organ Genera and Form Genera.

"Article PB. 1

Since the names of species, and consequently of many of the higher taxa of fossil plants are usually based on specimens of detached organs and since the connection between these organs can only rarely be proved, *organ-genera* (*organo-genera*) and *form-genera* (*forma-genera*) are distinguished as taxa within which species may be recognized.

An *organ-genus* is a genus whose diagnostic characters are derived from single organs of the same morphological category or from restricted groups of organs connected together.

A *form-genus* is one that is maintained for classifying fossil specimens that lack diagnostic characteristics indicative of natural affinity but which for practical reasons need to be provided with binary names. Form-genera are artificial in varying degree.

Note 1. *Organ-genera* based on detached parts may be distinguished not only by morphological characters, but also by reason of different modes of preservation.

Note 2. It is necessary to distinguish both *organ-genera* and *form-genera* since the former are held to indicate a certain degree of natural affinity, while the latter may—and in many cases do—include species belonging to different families or even groups of higher rank, e.g. ferns and pteridosperms. But *form-genera* have been recognized as pertaining to a special morphological category since 1828 (Adolphe Brongniart). Since that time they have been constantly used in taxonomic and morphological literature and they are quite indispensable.

Article PB. 2

The general rules applicable to the naming of recent plants apply also to the names of fossil plants and to those of organ-genera and form-genera."

Of the General Rules, Article 7 is specially relevant. The following is an extract (*Regnum Vegetabile* **8** : 14–15) :—

"Article 7

The application of names of taxa of the rank of order or below is determined by means of *nomenclatural types*. A nomenclatural type (*typus*) is that constituent element of a taxon to which the name of a taxon is permanently attached, whether as an accepted name or a synonym.

. . . .

Note 5. The typification of organ genera, form genera, genera based on plant microfossils (pollen, spores, etc.), genera of imperfect fungi, and any other analogous genera or lower taxa does not differ from that indicated above."

Lanjouw, in his preface to the 1956 edition of the Botanical Code, says: "Appendix II (Special provisions concerning fossil plants) is cared for by the Committee for Palaeobotanical Nomenclature. This Committee has decided to undertake a wholesale revision of the Appendix on the occasion of the Ninth International Botanical Congress to be held at Montreal in 1959. The present text is the same as the 1952 one " (*Regnum Vegetabile* **8** : 8). However, Dr. Sergius H. Mamay, Secretary of the Committee of Palaeobotanical Nomenclature, informs me that no proposals for modification have in fact yet been submitted (letter dated 4th March, 1958).

3. The distinction between Organ Genera and Form Genera is particularly important for the understanding of the problems in animal nomenclature now being examined. Form Genera are closely analogous to Parataxa as defined by Moore and Sylvester-Bradley ; in them, no attempt is made at a phylogenetic classification. Organ Genera, on the other hand, may exhibit diagnostic characters which permit the taxa recognised to be compared with those of the phylogenetic classification. They are based on such organs as leaves or fructifications. Sometimes they act as " holding-grounds " for species awaiting discovery of further organs for complete identification and transference to normal taxonomy. They are analogous not to Parataxa but to " Collective Groups " as used in parasitology and dealt with by J. C. Bradley (D.1/42 : 242–244) but not as defined in the Glossary to the Draft Code (*Bull. zool. Nomencl.* **14** : 276).

The most important distinction between Organ Genera and Form Genera is that the species recognised in Organ Genera are likely to be more or less co-extensive with those of natural genera. The only reason that they cannot be assigned to a natural genus is the lack of diagnostic characters provided by the type material. Frequently the later discovery of additional material permits the species to be transferred to a natural genus, when the specific name retains its original priority and authorship. The species recognised within form genera, on the other hand, are not ordinarily co-extensive with natural species. No amount of increased knowledge can therefore fit them for transfer to natural genera, for to do so would alter the whole concept applied to the name.

4. It will be evident that certain of the animal groups which have been discussed in the various documents relating to Case 1 fall readily into the category of Organ Genera or Collective Groups, whereas others can only be classed with Form Genera or Parataxa. Amongst the former are the otoliths (see, for example, Pokorný, D.1/39) ; amongst the latter are the conodonts and the aptychi (D.1/2, D.1/3). Sabrosky (D.1/61), in his proposals on form taxa has recognised the fact that species assigned to Collective Groups and " Form Genera " *sensu* Sabrosky (= Organ Genera as here understood) are normally transferred to natural genera if and when their natural taxonomic position is discovered. He has also recognised that it is not possible to adopt the same procedure with, for example, conodonts, without introducing confusion. But the mechanism he proposes to distinguish between Form Genera whose species compete in priority with natural genera, from Form Genera whose species do not so compete, appears to me to lack precision to an extent that would, if adopted, introduce grave ambiguity. For example, he states : " the species described

in form-genera are natural species, or treated as such. Their names are subject to all Rules regulating specific names, including both the Law of Homonymy and the Law of Priority ". This statement appears to me to be admirable in its application to Collective Groups and Organ Genera as here understood, but not to Form Genera or Parataxa. Sabrosky's mechanism for dealing with the situation in conodonts and aptychi is given as follows : " If zoological evidence indicates that a nominal species in a form genus does not refer to a single species but from the nature of the material may include homologous parts of two or more species, specialists in that group would be justified in not applying the name to any natural taxon." The decision of whether to apply the Law of Priority or not is thus left to individual specialists, and disagreement amongst them would certainly cause confusion. I believe it would be preferable to recognise two distinct procedures for the two cases, and I propose to deal with each in turn in the following paragraphs.

5. Despite the fact that I personally consider the distinction between Organ Genera and Form Genera to be fundamental to an understanding of the nomenclatural problem, and despite the fact, also, that palaeobotanists have long recognised the two categories, I should perhaps mention that not all botanists are convinced that the present definitions of the Botanical Code are unambiguous. Dr. C. A. Arnold, Chairman of the Committee of Palaeobotanical Nomenclature, informs me that he is himself considering proposing certain changes in these definitions.

Organ Genera and Collective Groups

6. Organ Genera and Collective Groups are analogous in the sense that many of the species in each category correspond with natural species, although their classification in terms of genera and higher taxa is temporarily or permanently unknown. But, as Mr. R. V. Melville has pointed out to me (*in litt.*), a " genus " in which the components consist of whole animals (larval stages) is not in other ways comparable to one in which the components consist of single organs or groups of associated organs. For, as Mr. Melville says : " parasitologists would seem to have every chance of disposing of their Collective Groups in a reasonable space of time, by working out the complete life-cycles of the parasites. With otoliths, on the other hand, there will always be many cases, especially among Mesozoic forms, where the whole-fish species is unknown and where the nomenclatural problem is therefore permanent ". There seems to be considerable value in retaining both terms (" Collective Groups " and " Organ Genera "), although controlling them with identical procedure.

7. Several of the animal groups which supporters of the Parataxa Plan have suggested might be classed as Parataxa do not, in my view, justify such treatment, in that there is no problem of dual nomenclature to be solved. Of those that present a problem of dual nomenclature, some are limited in that

this problem affects assignment to genus or higher taxon only ; these groups are in my view better classed as Organ Genera than as Parataxa or Form Genera. The otoliths provide a clear example of such groups.

8. Some authors have suggested that the work of animals could suitably be treated under the Parataxa Plan (e.g. D.1/34, D.33/5, Point 15). It would seem to me that there may be some cases in which such works could suitably be dealt with using the same procedure as that advocated for Organ Genera or Collective Groups (e.g. in some galls). However, in many cases I believe they would be more suitably dealt with as natural taxa. Possibly certain fossil trails of unknown affinity might warrant consideration as Parataxa. The work of animals embraces so diverse a collection of entities that each case needs consideration on its own merits. No general stipulation assigning the work of animals to Organ Genera or to Parataxa would seem to me wise.

9. The botanical method of defining an Organ Genus differs in one important respect from the proposals for the recognition of Collective Groups. Organ Genera are defined in botany by reference to a type-species, as are natural genera, whereas the resolution of the American Society of Parasitologists specifically states that " collective groups . . . require no type species " (D.1/14 : 89), and such a statement has long been embodied in the *Règles* (Article 8, first *Rec.*) and is incorporated in the draft Code, 1958 (Article 14 Section 2).

Whether or no it is desirable to define Collective Groups by reference to type species is a matter of some moment. The advantages of introducing objectivity into their definition are surely as great as those that have led us to modify the Code so that all taxa are now required to be based on types (Code 1958, Article 18). I am not clear what disadvantage would accrue from adopting the same procedure with Collective Groups, except that parasitologists would need to choose types for names of Collective Groups which at present have none.

It may be mentioned in parenthesis that not all palaeobotanists are agreed that the Botanical Code is wise in its stipulation that names of Organ Genera and Form Genera should be based on type species. The point of view of those that feel that this is a mistake has been explained to me by Professor Tom M. Harris, and is set out in the following example. An Organ Genus *X-us* has a type species *X-us a-us* whose true taxonomic position is not at first known. Later this species is found to be referable to the natural genus *Y-us*. The Botanical Code does not specifically state the principle " once an Organ Genus, always an Organ Genus ", so that there is, in Professor Harris's view, a danger that a botanist might regard *X-us* (originally an Organ Genus) as in competition with *Y-us* (a natural genus). If such a transfer is made, and *X-us* is regarded as a natural genus, the original Organ Genus is left without a name, and there is a temptation to introduce for it a new name (*Z-us*). Thus a confusing and unnecessary set of name-changes might result—*Y-us* becoming *X-us* and *X-us* becoming *Z-us*. If, however, suggests Professor Harris, no type species had ever been assigned to *X-us*, it would not be available for transfer to a natural genus, and these difficulties would not arise.

In my view, a simpler and more satisfactory method of avoiding the difficulties envisaged by Professor Harris would be achieved by stipulating that names given to Collective Groups, Organ Genera and Form Genera are not to be regarded as available as those of Natural Genera. In such a case a species might be type of an Organ Genus (*X-us a-us*) and also type of a natural genus (*Y-us a-us*), retaining the same specific epithet, but occurring in alternative binominal combinations. In fact this suggested stipulation is common to all the proposals placed before the forthcoming Congress, being incorporated in the proposals of Moore and Sylvester-Bradley (D.1/1), J. C. Bradley (D.1/42) and Sabrosky (D.1/61), but Sabrosky suggests that the subsequent transfer of the type species of a Form Genus (= Organ Genus as here understood) to a natural genus would necessitate the designation of a new type-species. Sabrosky is therefore in disagreement with me in that he is not in favour of a single species being regarded at the same time both the type of an Organ Genus, and a member of a natural genus.

10. The modification in the Rules necessary to allow recognition of Collective Groups and Organ Genera has been adequately covered by J. C. Bradley (D.1/42) and Sabrosky (D.1/61).

Parataxa and Form Taxa

11. The customary procedures for dealing with Form Genera in palaeobotany, although not yet enumerated in the Code, seem to be comparable to those proposed for Parataxa. The term " Parataxon " was coined in the first place to avoid confusion with the botanical " Form Taxon ". However, in view of the fact that some of the documents submitted have proposed that the Parataxa Plan should be brought to bear on groups that are sometimes considered animals, sometimes plants, and sometimes protists (e.g. coccoliths, D.1/55 and 1/56), it seems that the Colloquium might usefully consider whether the proposed " Parataxa " would be better designated " Form Taxa ". The abolition of the word " parataxonomy " might also afford relief to those who consider this discipline undesirable.

In my view, the two terms are alternatives, and the decision on which term to use would not affect the proposed procedure.

12. The modifications in the Rules that would be necessary for the recognition of Parataxa or Form Taxa have been set out by Moore and

Sylvester-Bradley (D.1/1) and Moore (D.33/5). They cover only the cases envisaged by Sabrosky (D.1/61) in the second limitation of his proposed regulation concerning " species in form-genera ".

Summary

13. It is proposed that the Rules be modified to recognize two categories of artificial taxa :—

(a) those comprising Collective Groups and Organ Genera. Although taxa higher than genera are not normally recognized, they should be permitted if individual taxonomists wish to employ them. The species in this category would be regarded as nomenclaturally coordinate with normal species, and would be subject to both the Law of Priority and the Law of Homonymy.

(b) Those comprising Form Taxa or Parataxa, the Congress to decide which is the preferable term. The species in this category would be form-species (or paraspecies) and would not be available for transfer to natural genera.

DOCUMENT 1/64

Summary of proposals and comments concerning Parataxa, Form Taxa, Organ Genera and Collective Groups

(Commission Reference : Z.N.(S.) 1056)

Report prepared at the request of the Secretary
to the International Commission

By **P. C. SYLVESTER-BRADLEY**

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(Enclosure to a letter dated 7th April 1958)

Introduction

At the request of Mr. Francis Hemming, made in his capacity as Secretary of the International Commission of Zoological Nomenclature, I have prepared the following summary of the documents which have so far been received commenting on Case No. 1. This summary is intended to form an objective appraisal of the opinions and view-points of all those who have expressed them, and does not represent my own opinions, except in so far as these are included as those of one of the contributors to the discussion. I have not included in this summary viewpoints concerning the detailed proposals relating to conodonts and aptychi (D.1/2 and 1/3) as these are not immediately concerned with the general matters under discussion, and are not, indeed, to form part of the agenda at the London meetings. Dr. Trauth's important contribution (D.1/41) falls into this category, and is therefore not included in the present summary. If, apart from such matters, I have omitted to record any author's view-point, or have misrepresented anything that has been written, such errors are unintentional, and I hope will be excused, for the subject has become excessively diffuse, and has not been easy to condense in as logical a form as I could have wished.

2. Of those who oppose the Parataxa Plan, a few consider the scheme premature (e.g., Branson, D.1/25), but almost all feel that the situation disclosed in the Application needs some action by Congress or Commission, even if the

Parataxa Plan itself be unnacceptable. In some cases such alternatives have not been clearly formulated, and I have not found it possible to summarise them. For example, Bassler (D.1/22) suggests " any name based upon an aptychus can remain until the whole shell is known, whereupon the aptychus-name can go in parenthesis labelled as the operculum ". Again, Wright (D.1/49, para. 6), speaking of Conodonts, says : " During the transitional period, which has already begun, there will be very serious problems of nomenclature on which the Commission will have to advise ". Apart from such rather vague suggestions, the alternatives that have been proposed (each of which is subsequently considered in a separate section of this summary) are as follows :

(1) Parataxa ;
(2) Collective Groups ;
(3) Form Taxa ;
(4) Organ Genera ;
(5) Technical Terms ;
(6) Plenary Powers.

The formal proposals of D.1/1 (para. 13) include a statement, added at the suggestion of Professor J. C. Bradley (see D.1/24) to cover " life-stages of animals ". Subsequent discussion has shown that this inclusion has little if any support, even from the promoters (Moore and Sylvester-Bradley ; see D.1/14, annexes 4–6, pp. 90–91). Although the Colloquium may wish to discuss the possibility of combining provisions dealing with Parataxa with those dealing with Collective Groups, this suggestion is not proceeded further with here.

3. Before proceeding with a formal summary of proposals dealing with each of the sections enumerated in the previous paragraph, it will be helpful to define the section-headings in such terms as might be set out in the Glossary of the Code if the proposals concerning them were approved by Congress. Such definitions have not yet, in all cases, been formally proposed, and the following is my own attempt at expressing the intentions of the various authors :—

Parataxa : artificial taxa, ranging in rank from Order to subspecies, based on material inadequate for diagnosis of natural taxa, and classified on arbitrary morphological grounds, without regard to relationships. Para-orders, parafamilies, paragenera and paraspecies may be recognized (see para. 8 below). Species assigned to paragenera are paraspecies, and are not necessarily coextensive with natural species. The names of either category do not enter into competition with those of the other.

Form Taxa (*sensu* Sylvester-Bradley) : as for Parataxa. Form Species, Form Genera and Form Taxa of higher rank may be recognised.

Form Genera (*sensu* Sabrosky) : as for Organ Genera and Collective Groups.

Organ Genera : artificial taxa of generic rank based on species represented by disassociated parts derived from single or grouped organs of the same morphological category that temporarily or permanently lack diagnostic characters indicative of natural affinity. Species assigned to Organ Genera are natural species, or are treated as such, and their names are subject to all Rules governing the names of species assigned to natural genera.

Collective Groups : artificial taxa of generic rank based on species represented by immature stages that lack diagnostic characters indicative of natural affinity. Species assigned to Collective Groups are natural species, and their names are subject to all Rules governing the names of species assigned to natural genera.

Section 1. Parataxa

4. Apart from the questions of Collective Groups (see para. 2 above), general support (in some cases subject to certain conditions) or general opposition to the Parataxa Plan has been expressed as follows :—

Supporting the Parataxa Plan	Opposing the Parataxa Plan
17 British palaeontologists (D.1/53, Res. 3)	56 members Washington Discussion Group (D.1/35)
R. C. Moore (D.1/1)	14 British palaeontologists (D.1/53, Res. 3)
P. C. Sylvester-Bradley (D.1/1)	†R. S. Bassler (D.1/22)
*W. J. Arkell (D.1/6)	†C. C. Branson (D.1/25 ; 1/59)
D. L. Frizzell (D.1/7 ; 1/17)	†R. O. Fay (D.1/26)
Harriet Frizzell (D.1/7 ; 1/17)	*O. H. Schindewolf (D.1/31)
*E. Basse (D.1/8)	E. Voigt (D.1/36)
J. Brookes Knight (D.1/9)	E. L. Yochelson (D.1/48)
†H. Schmidt (D.1/10)	*C. W. Wright (D.1/49)
Curt Teichert (D.1/11)	H. B. Whittington (D.1/52)
*D. T. Donovan (D.1/13)	P. E. Cloud (D.1/58)
†S. P. Ellison, Jr. (D.1/18)	
†J. W. Koenig (D.1/20)	
Dr. Whitely (D.1/21)	
R. V. Melville (D.1/23)	
Jean Roger (D.1/27)	
M. F. Glaessner (D.1/28)	
O. M. B. Bulman (D.1/29)	

F. M. Swain (D.1/30)	
*†A. K. Miller (D.1/32)	
*†W. M. Furnish (D.1/32)	
G. Ubaghs (D.1/33)	
E. M. Hering (D.1/34)	
Leif Størmer (D.1/37)	
†W. H. Haas (D.1/38)	
Vladimir Pokorný (D.1/39)	
J. S. Hampton (D.1/43; 1/51)	
†K. J. Müller (D.1/44)	
R. E. H. Reid (D.1/45)	
A. N. Dusenbury, Jr. (D.1/46)	
†F. H. T. Rhodes (D.1/47)	
*M. K. Howarth (D.1/50)	
A. M. Simonetta (D.1/54)	
Georges Deflandre (D.1/55)	
M. Deflandre-Rigaud (D.1/55)	
Charles Downie (D.1/56)	
W. D. I. Rolfe (D.1/57)	

* Specialist in Ammonoidea;
† Specialist in Conodonts.

Thus 36 individuals are in support of the proposals, 9 are in opposition. To these must be added the votes given at the meetings of the Washington Discussion Group and the British palaeontologists respectively. The former were unanimously in opposition (56 to nil); the latter had a slight majority in favour (17 for; 14 against). Both meetings included a few persons who have also expressed an opinion as individuals. Leaving out of account the resulting duplication of votes, the totals are: 53 for, 79 against. The expression of specialists in ammonoids and conodonts respectively is as follows:

	For	Against
Ammonoids	6	2
Conodonts	8	3

Sabrosky (D.1/61) proposes the recognition of Form Taxa as a counter proposal to both the Parataxa Plan and the recognition of Collective Groups (see para. 14 below).

5. In D.1/1, it was proposed that the Parataxa Plan should only apply to certain groups of animals, and that, in the event of the Plan being approved by the Congress, only groups specifically recognised by the Commission were to be admitted as eligible for the creation of Parataxa. Detailed applications in respect of Conodonts and Aptychi were submitted as Documents 1/2 and 1/3 respectively. Subsequent discussion has revealed three viewpoints :—

(a) some strongly support the safeguard that Parataxa should only be eligible in groups approved by the Commission (e.g., Melville, 1/23 ; Ubaghs, 1/33 ; British palaeontologists, 1/53) ;

(b) some suggest that all names originally proposed as Parataxa should be admitted as such, without prior reference to the Commission (e.g., Hemming D.1/16, Annexe 1, para. 4 ; Moore, D.33/5, Point 10) ;

(c) some propose that the erection of Parataxa within an animal group (both retroactively and presently) be permitted without prior reference to the Commission, but, if subjected to protest within a specified time, be referred to the Commission for decision (e.g., Frizzell and Frizzell, D.1/17 ; Koenig, D.1/20).

6. No detailed proposals for the recognition of Parataxa in groups other than aptychi and conodonts have yet been submitted, but the following groups have been named as *possibly* suitable for the application of the Parataxa Plan :—

coccoliths (D.1/1 ; 1/55 ; 1/56) ;

sponge spicules (D.1/1 ; 1/45) ;

alcyonarian spicules (D.1/1) ;

holothurian spicules (D.1/1 ; 1/17 ; 1/43 ; 1/49 ; 33/5) ;

crinoid ossicles (D.1/1) ;

cystoid ossicles (D.1/1) ;

blastoid ossicles (D.1/1) ;

echinoid ossicles (D.1/1) ;

asterozoan ossicles (D.1/1) ;

scolecodonts (D.1/1 ; 1/57) ;

gastropod radular elements (D.1/1) ;

gastropod operculae (D.1/1) ;

cephalopod mandibles (D.1/11) ;

cladoceran ephippia (D.1/30) ;

the works of animals (D.1/34 ; 33/5, Pt. 15) ;
otoliths (D.1/39) ;
radiolarian horns (D.1/55) ;
chrysomonadin scales (D.1/55) ;
hystrichospheres (D.1/55).

Some of the references in the above list support the recognition of Parataxa in the group in question, some oppose it, and some are non-committal. It is evident that many of those who support the Parataxa Plan would oppose its application in detail to many of the above groups. Those who oppose the Parataxa Plan in principle would probably contend that the fact that it is possible to draw up such a list is an indication of how widely " parataxonomy " could spread if allowed to get out of control. It has been suggested that a guide as to whether or no parataxa should be permitted in a particular group might be provided by stipulating that the Commission should recognise Parataxa " only in groups where a dual nomenclature already exists and is currently found to be a practical necessity " (D.1/53, res. 2).

7. The suggestion made by Dr. Hering (D.1/34), that the Congress should direct that the classification and nomenclature of the works of animals should be in terms of Parataxa, merits separate consideration, as it involves the question of whether a name based on the work of an animal is available for zoological nomenclature. According to J. C. Bradley's interpretation of the Paris decisions (*Bull. zool. Nomencl.* **4** : 255, paragraph 18), the description of the work of an animal may serve to make a name available if published prior to 1931, but not if published since 1930 (see Draft *Règles*, 1958, Article 1, Section 3 ; Article 6, Section 3(3) ; Article 8, Section 8(b)(6) ; Article 10, Section 2(b) ; also Doc. 24/1, items 6, 21, 38, 39 and 51). Professor Bradley makes it clear that he doubts whether this was the intent of the Paris Resolution, and adds : " If names based solely on the work of animals, and proposed subsequent to 1930, are to be held valid, further enactment by the Congress is necessary " (*Bull.* **14** : 73) (see also D.33/5, Point 15).

8. Certain of those who support the Parataxa Plan have suggested amendments. Amongst these is the proposal that, in addition to the term " Parataxon ", it is necessary to coin terms other than " genus ", " species " etc., for the parataxa themselves. Four suggestions have been made :

(a) " paragenus ", " paraspecies " etc. (Pokorný, D.1/39 ; Howarth, D.1/50) ;

(b) " progenus ", " prospecies " etc. (Dusenbury, D.1/46) ;

(c) terms in the "military classification" of Croneis: "manipulus", "centuria", etc. (Dusenbury, D.1/46);

(d) "form genus", "form species" etc. (Sylvester-Bradley, D.1/63); this suggestion is considered further in Section 3 below.

9. Another amendment suggested is that binomina denoting Parataxa should be differentiated from those denoting natural taxa by a prefix, or in some other way (D.1/39, para. 13; 1/44, para. 4; 1/53, resolution 4). Two specific suggestions for such prefixes have been made:

(a) the prefix "pg." placed before the name of a "paragenus", "ps." before the name of a "paraspecies" (Pokorný, D.1/39; the indication of a "paraspecies" would only be necessary if a paraspecies were to be placed in a natural genus, a combination which does not appear to be possible according to any of the proposed schemes);

(b) a degree sign preceding the name of the "paragenus" (Müller, D.1/44).

10. It has been suggested that if Parataxa are to be recognized, it is not appropriate that their names should be recorded in the *Official Lists* and *Indexes* of the names of natural taxa, but that new *Lists* and *Indexes* should be opened in the names of Parataxa (Dusenbury, D.1/46).

11. Mr. Hemming at one time suggested that the names of Parataxa should be independent from those of natural taxa both for the purposes of the Law of Homonymy as well as for those of the Law of Priority (D.1/16, Annexe 1, paragraph 7). The original proposals, on the other hand, stipulate that they shall only be independent for the purposes of the Law of Priority (D.1/1). Mr. Hemming's suggestion was opposed by Sylvester-Bradley (D.1/16, Annexe 2), Moore (D.1/16, Annexe 3), Melville (D.1/23) and Howarth (D.1/50) and has since been withdrawn (see D.1/60).

Section 2. Collective Groups

12. In the present *Règles*, Collective Groups are recognized in the first Recommendation of Article 8. In the Draft Code this Recommendation is not incorporated; the names of Collective Groups are ruled to be unavailable, and they are defined with this meaning in the Glossary (Draft *Règles*, 1958, Article 14, Section 2; Glossary, p. 276; also Doc. 24/1, item 67). The American Society of Parasitologists, however, propose that Collective Groups should be recognized in the Code, and should rank with genera for the purposes of the Law of Homonymy (D.1/14, Annexes 3 and 9), the resolution being supported

unanimously at a meeting of the Society estimated to number over 200 (D.1/14, p. 98). Subsequently these proposals were formalised by J. C. Bradley (D.1/42) in a set of proposals for alterations to the Draft *Règles*.

13. The proposals for Collective Groups drafted by the American Society of Parasitologists (D.1/14) include the statement " they require no type species ". This principle was also stated in the old *Règles* (Article 8, first Recommendation) but has not been made clear in J. C. Bradley's new proposals (D.1/42). Sylvester-Bradley (D.1/63) has suggested that the question of whether Collective Groups should be based on type species or not is worthy of reconsideration. On this question the following may be quoted from McIntosh (D.1/14, Annexe 7, p. 93):

> " Many of the names of the ' Collective Groups ' that are treated as genera for convenience, were proposed as genera but are synonyms of valid genera. If types were designated for other ' Collective Groups ' and the name treated as generic taxa, they too would become synonyms of older genera. Some of these names were proposed for the purpose of serving as genera of larval stages of certain species that had similar characteristics. For such names (genera for convenience) no types were designated nor were any needed as the authors were aware that when the life histories were known several named genera would probably be represented under the collective group names. Other names that have come into use, as collective groups, were proposed as valid genera with types designated at the time or at a later date, for what were believed to be, in some cases, free-living animals but proved later to be a free living stage in the life cycle of parasites."

Sylvester-Bradley, on the other hand, maintains that " the advantages of introducing objectivity into their definition are surely as great as those that have led us to modify the Code so that all taxa are now required to be based on types " (D.1/63). Sabrosky (D.1/61) suggests the designation of type species might be made optional.

Section 3. Form Taxa

14. It has been suggested that Form Taxa as used in the Botanical Code might have a certain advantage over Parataxa, and proposals to this effect have been made by Sabrosky (D.1/61) and Sylvester-Bradley (D.1/63).

Sabrosky (D.1/61) suggests that no distinction should be made between Parataxa, Collective Groups, Organ Genera or Form Taxa, but that all should be referred to by the latter name. The Rules would regulate the names in the way recommended by others for Collective Groups and Organ Genera, in which the species would be regarded as natural species, and would keep their original priority if transferred to natural genera. An escape clause is inserted, however, which excepts such groups as conodonts and aptychi from these provisions.

This clause states that specialists in groups in which the nominal species do not refer to natural species " would be justified in not applying the name to any natural taxon ". Sabrosky makes the designation of type species for form genera optional.

Sylvester-Bradley (D.1/63), on the other hand, proposes to limit the term " Form Taxa " to the groups elsewhere referred to as Parataxa, and suggests that Sabrosky's " form taxa " are better referred to as " Collective Groups " or " Organ Genera " as the case may be. He approves Sabrosky's proposals so far as they deal with Collective Groups or Organ Genera, but is opposed to the " escape clause ", believing it would lead to ambiguity in interpretation. He suggests no new procedure for dealing with Form Taxa, regarding the term merely as an alternative to that of " Parataxa ". He makes the point, however, that the abolition of the word " Parataxonomy " might afford relief to those who find its practice philosophically repugnant.

Section 4. Organ Genera

15. Organ Genera, long recognised in palaeobotany, are proposed by Sylvester-Bradley (D.1/63) as an alternative name for the Form Genera of Sabrosky (D.1/61), to be regulated by exactly the same procedure as Collective Groups. The distinctive difference between Organ Genera and Form Genera, according to Sylvester-Bradley's scheme, would be that the former would consist of natural species, the latter of form species. Otoliths are cited as an example of the former, conodonts of the latter.

Section 5. Technical Terms

16. At the Paris meeting of the Congress it was decided that names given to " sclerites " and other animal fragments should be treated as technical terms, and ruled unavailable as zoological names (*Bull. zool. Nomencl.* **4** : 293–294). This decision has never been implemented, partly owing to the difficulty that arises in fixing objectively whether or no a particular name is that of a fragment within the sense of this provision, or within the sense of Art. 27, subsection (a), which states that " the oldest available name is retained when any part of an animal is named before the animal itself " (see footnote to D.1/1, p. 6).

17. Arkell's first proposal regarding aptychi (reproduced as D.1/4) was similar in nature to the above paragraph, but limited the provision to the exclusion from zoological nomenclature of " any generic or specific name based solely upon the aptychus of an ammonite ". This stipulation was opposed by Moore, Sylvester-Bradley and others, and Arkell now supports the Parataxa Plan (D.1/6), but Wright (D.1/49) still favours the plan of rating names given to aptychi as extra-nomenclatural technical terms.

Section 6. Plenary Powers

18. Schindewolf (D.1/31), the Washington Discussion Group (D.1/35), and (by implication) Branson (D.1/25) contend that either the aptychus problem or the whole problem of dual nomenclatures (" in those few cases where strict application of the rules would cause really significant confusion " : D.1/35) could be solved by recourse to the Plenary Powers of the Commission. Detailed proposals are not available for the conodonts, but D.1/5, para. 8 (2) and (3) deals with the more flagrant examples of aptychi in a form which could immediately be adapted to Plenary action.

19. Branson (D.1/59) suggests that names given to conodont assemblages should be suppressed (presumably by Plenary Powers) as " unnecessary, premature and hypothetical ". We have here, of course, a case of disagreement amongst specialists, Rhodes (D.1/47, paras. 5 and 6) listing evidence which he claims leaves " little reasonable doubt that the assemblages are natural (as opposed to coprolitic or fortuitous) associations ", whereas Branson maintains that " much evidence indicates that the ' assemblages ' are chance coprolitic associations ".

Branson's proposals make an interesting parallel to those at one time put forward by Arkell for the suppression of names given to ammonoid aptychi (D.1/4 ; see para. 17 above). In Arkell's case, however, the names suggested for suppression were those which Moore and Sylvester-Bradley would refer to Parataxa, whereas in Branson's case, the names suggested for suppression are those which Moore and Sylvester-Bradley would rate as natural taxa.

DOCUMENT 1/65

Comment on the Moore/Sylvester-Bradley "Parataxa Plan"

(Reference : Professor Moore's Digest reproduced as Document 1/15)

(Commission Reference : Z.N.(S.) 1056)

By **ERROL I. WHITE**

(*British Museum* (*Natural History*), *London*)

(Letter dated 8th April 1958)

I can answer your circular letter of the 8th July 1957, very briefly by saying that I am dead against special provision for Parataxa in the *Règles.*

DOCUMENT 2/21

(*continued from page* 762)

Support for Dr. W. J. Arkell's proposal for the withdrawal of Copenhagen Decision 54(1)(a)

(Commission Reference : Z.N.(S.) 835)

By **R. V. MELVILLE**

(*Geological Survey and Museum, London*)

(Enclosure to a letter dated 27th March 1958)

Of the modifications to the Berlin Code of Zoological Nomenclature made over the last ten years, or proposed for discussion at the forthcoming London Congress, some reinforce logic and principle as giving moral force to the Rules while others are based on common sense and established practice. The broadening of the application of the type-concept is one of the strongest examples of the former kind.

2. It will be difficult to produce a revised code in which the operations of logic and of usage are clearly segregated, and still more difficult to apply one in which this segregation is obscure. In those parts of the Code where the type-principle prevails it is therefore important that the force of logic should not be unnecessarily weakened by the introduction of other ideas.

3. In the case of names of the family-group that have to be changed because of a change in the name of the type genus, logic demands that the same treatment be given to cases where the name of the type-genus is found to be a homonym or an objective synonym of an earlier nominal genus. I follow Hopkins (1958, *Bull. zool. Nomencl.* **15** : 247–248) in regarding different treatment of names that have to be changed for either of these reasons as illogical. There is not only logic, however, behind the request for the repeal of Copenhagen Decision 54(1)(a) ; the Rules have always stated that the name of a family must be based on the name of the type-genus (Berlin, Article 5) and they have been faithfully followed in this by a large proportion of zoologists and, so far as I am aware, by all palaeozoologists.

4. Those who wish to maintain Copenhagen Decision 54(1)(a) work in fields where Berlin Article 5 has been consistently violated. They not only expect other zoologists to give a spurious legality to their breaches of the Code, but they go so far as to suggest (e.g. Slater, 1958, *Bull. zool. Nomencl.* **15** : 352) that is it they who have been right and the Berlin Code and its adherents who have been wrong ever since 1905. If this has been so, why could not these zoologists have proposed an amendment to the code earlier ? If they had had a true regard for either the stability and universality of nomenclatural practice or for the moral standing of the Code, they would have amended their own wrong practice.

5. It is wrong to suppose that Copenhagen Decision 54(1)(a) is not retroactive. The Rules must provide means for dealing with existing nomenclatural problems as well as means whereby the creation of new problems can be avoided. Since only logical rules can provide a common fundamental basis, and a convincing one, for dealing with the mistakes of past authors, those parts of the Code that are based on logic, including those calling for application of the type-principle, are all retroactive. The modifications based on usage are not, and these are expressly designed in the interests of the future.

6. I therefore base my support of Dr. Arkell's proposal for the rejection of Copenhagen Decision 54(1)(a) on the following arguments :—

(i) where logic is the basis of any article in the Code, its force should not be weakened ;

(ii) the type-principle is one of the strongest examples of the use of logic in the Code ;

(iii) the only logical application of this principle in the present case is in terms of Berlin Article 5 ;

(iv) apart from logic, those who seek to maintain Copenhagen Decision 54(1)(a) seek to legalise breaches of the Code ; and since this decision is by its nature retroactive, they can do this only at the expense of those zoologists who have adhered to the Code.

7. It seems to me impossible to govern by rule those cases where the type genus of a family-group taxon is thought to be a subjective synonym of an earlier nominal genus. This is because it is impossible to prevent zoologists from proposing new family-group taxa in such cases and equally impossible to ensure universal acceptance of the names for these taxa. Cases of this kind can surely only be subject to a Recommendation. In my view, this Recommendation should advise authors to use names for family-group taxa that are based on the name of the type genus.

DOCUMENT 10/5

(*continued from page* 730)

The Substantive Languages of the International Rules : proposed making-good of an omission in the Draft of the English Text

(Commission Reference : Z.N.(S.) 1259)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 26th March 1958)

The purpose of the present note is to draw attention to an aspect of the question of the languages to be accepted as the substantive languages for the International Rules of Zoological Nomenclature which has hitherto escaped attention and which requires to be considered at the forthcoming London Meetings.

2. The problem which the present note is concerned to raise is the need for complying with certain directions issued in this matter by Professor Ragnar Spärck, when, as President of the Fourteenth International Congress of Zoology, Copenhagen, 1953, he executed a Minute on 7th November 1957 giving his decision regarding the languages to be accepted as the substantive languages of the International Rules of Zoological Nomenclature. By directions given on the same occasions the Minute so executed by Professor Spärck was incorporated in the Official Record of the proceedings on nomenclature of the Copenhagen Congress and as such was published both in English and in French in December 1953 (*Copenhagen Decisions zool. Nomencl.* : 126–131). The aspect of this question which has formed the subject of discussion in the papers so far placed on the London Agenda Paper (Documents 10/1 to 10/4) has been whether the directions given by Professor Spärck on the question of the languages to be accepted as the substantive languages for the International Rules should be adhered to in their entirety or whether they should be modified in some, and if so in what respect.

3. The provision in Professor Spärck's Minute which has so far escaped attention is that embodied in the concluding paragraph (paragraph 5) of that Instrument. That paragraph as drafted refers back to the preceding paragraph (paragraph 4) in which Professor Spärck had given directions as to the languages to be accepted as the substantive languages for the International Rules. Accordingly, for the sake of clarity the English and French Texts of paragraph 4 as well as those of paragraph 5 of Professor Spärck's Minute are quoted in full in the Annexe to the present note.

4. The point which has here to be noted is that in paragraph 5 of his Minute Professor Sparck gave directions that the decisions in regard to the languages to be accepted as the substantive languages for the International Rules given in paragraph 4 of that Minute, together with his direction as to the procedure to be adopted for reconciling any differences between the substantive texts which it might later be alleged to exist, should " be incorporated in each of the substantive texts of the Rules as revised and approved by the Copenhagen Congress " under his Presidency.

5. The foregoing important decision by the President of the last Congress appears to have been overlooked by Professor Chester Bradley when preparing his draft of the English text of the *Règles* which contains no provision on this subject. In the form in which that Draft has been prepared it would appear that Article 30 would be the appropriate point at which to embody the provision required to give effect to the directions given by Professor Spärck in paragraphs 4 and 5 of his Minute of 7th November 1953. This provision would naturally become Section 1 of the foregoing Article, the existing Sections following immediately thereafter, these Sections being renumbered, the Section now numbered (1) being renumbered (2) and so on.

6. I accordingly recommend that effect be given to Professor Spärck's decision by incorporating it in the *Règles* in the manner indicated in the immediately preceding paragraph.

ANNEXE TO REPORT BY THE SECRETARY
DATED 26TH MARCH 1958

English and French Texts of paragraphs 4 and 5 of the Minute executed on 7th November 1953 by Professor R. Spärck, President, Fourteenth International Congress of Zoology, Copenhagen, 1953

(Reference : Copenhagen Decisions Zool. Nomencl. : 128-131)

English Text	**French Text**
4. I am satisfied that a solution on the following lines will be acclaimed by zoologists in all countries. I have therefore authorised and instructed Mr. Hemming to include with the Official Report of the decisions on nomenclature taken by the Fourteenth International Congress of Zoology, Copenhagen 1953, the present Minute directing that, subject	4. Je suis convaincu que la solution suggérée ci-dessous est conforme a l'intéret général, et sera applaudie par les zoologues de tous les pays. J'ai donc prié M. Hemming d'ajouter au procès-verbal des décisions sur la nomenclature prises au XIVème Congrès International de Zoologie (Copenhague, 1953) la minute ci-après, valable sous réserve de l'en-

to the undertaking given by the International Trust for Zoological Nomenclature that it will arrange for the preparation and publication of a French text of the revised Rules, identical in substance and in form with the English text, immediately after the English text has been finally approved :—

(1) The French and English texts of the International Rules of Zoological Nomenclature, as revised by the Thirteenth International Congress of Zoology, Paris, 1948, and as further revised and expanded by the Fourteenth International Congress of Zoology, Copenhagen, 1953, prepared in the manner agreed upon by the last-named Congress and published by the International Trust for Zoological Nomenclature are both authentic, that is, the French text is the substantive text of the Rules and so also is the English text.

(2) In the event of its having been alleged at any time that on a due construction of the words employed there is a difference of meaning in any provision as between the two substantive texts, the matter is at once to be laid before the International Commission on Zoological Nomenclature, whose decision shall be final.

5. I further direct that, in order to prevent any misunderstanding in this matter the foregoing decisions be incorporated in each of the substantive texts of the Rules as revised and approved by the Copenhagen Congress under my Presidency.

gagement pris par l'International Trust, de faire préparer at publier un texte français des *Règles* révisées, identique au texte anglais, et par le contenu, et par la forme, aussitot après l'approbation définitive du text anglais :—

(1) Les textes francais et anglais des Règles Internationales dela Nomenclature Zoologique, révisées par le XIIème Congrès International de Zoologie (Paris, 1948) ; revisées a nouveau et développées par le XIVème Congrès ; préparées conformément aux décisions de ce dernier Congrès ; et publiées par l'International Trust, sont tous deux authentiques, c'est-a-dire que le texte français fera foi, et que le texte anglais fera également foi.

(2) Si quelgu'un alléguait qu'une interprétation légitime des mots employés puisse donner lieu à une différence de sens entre les deux textes, la question serait aussitôt portée devant la Commission Internationale de la Nomenclature Zoologique, dont la décision sera sans appel.

5. J'ordonne en outre qu'afin d'éviter toute méprise sur ce point, les décisions précédentes figurent sur l'un et l'autre textes officiel des Règles révisées et approuvées sous ma présidence par le Congrès de Copenhague.

DOCUMENT 19/3

(*continued from page* 330)

Proposed relaxation of the ban on intemperate language

(Commission Reference : Z.N.(S.) 1296)

and

DOCUMENT 23/3

(*continued from page* 344)

Proposed relaxation of the ban on names calculated to give personal and other types of offence

(Commission Reference : Z.N.(S.) 1297)

By **CYRIL DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Enclosure to a letter dated 22nd March 1958)

It is noted that Mr. Sabrosky has suggested the elimination of the consideration of intemperate language from Article 26 of the draft *Règles* and also of names calculated to give offence from Article 6, Section 1(d), Article 10, Section 2(a), and Article 23, Section 1(a)(i), and that his remarks, as well as your comments thereon, are published in 1958, *Bull. zool. Nomencl.* **15** : 328–330 and 341–344.

While these matter do not seem of great importance to me, being of such exceptional occurrence, it is nevertheless true that provisions respecting them have been in the *Règles* for some years, and by some it may be assumed by their elimination at this time that zoologists have come to feel differently about them, which of course is not true.

In the circumstances it seems to me that such matters could be treated with equal effectiveness by omitting them from their present positions in the *Règles* and incorporating them in the Code of Ethics. After all, these provisions relate to general rules of human conduct rather than to the restricted sphere of nomenclature.

DOCUMENT 21/3

(*continued from page* 735)

Draft " Règles ", Article 28, Section 11 (gender of generic names) : criticism of proposals in draft

(Commission Reference : Z.N.(S.) 996)

By **R. PH. DOLLFUS**

(*Muséum National d'Histoire Naturelle, Paris*)

(Enclosure to a letter dated 8th April 1958)

Le Rédacteur de l'article 28 est mal informé au sujet de la formation des mots composés grecs. Par exemple, il écrit (p. 209) que " *stomus* " est incorrect et que ce mot n'existe pas en grec. Il est évident que, en grec, ce mot n'existe pas " isolé ", mais il existe en composition. D'après ce que croit le rédacteur, quand un mot composé a son deuxième composant tiré de στόμα il doit se terminer par ςτομα (*stoma*). C'est complètement inexact, quand les grecs tiraient de στόμα le 2e composant, ils le changeaient en στομος, sauf si le premier composant était une préposition* ; ils disaient, par exemple, δίστομος, τρίστομος, τετρὰστομος, χρυσόστομος, ce qui se transcrit en latin par : *distomus, tristomus, tetrastomus, chrysostomus* ; même quand il s'agissait d'un adjectif au féminin ou au neutre, les grecs ne le terminaient pas par στομα, mais par στομος au féminin et στομον au neutre, par exemple : χρυσόστομος, ος, ον. Tous les noms de genre terminés en *stomus* sont donc corrects.

Si un substantif grec tiré de στομα est du neutre, il a subi une altération, par exemple τό περιστόμιον-ου (ouverture d'un vase) et non pas περιστόμα.

Certaines particules comme εὐ (= bien), δυς (= mal), ἀν (latin *in*), ἡμι (latin *semi*) ne modifient pas, en général, la terminaison du second composant, qui garde alors sa terminaison comme si le premier composant était une préposition ; par exemple ἡ αν-δρία, ας, ἡ ou ὁ ἡμιονος, ου. Il y a cependant quelques exceptions, par exemple demi-drachme ne se disait pas ἡ ἡμιδραχμη mais το ἡμίδραχμον, ου.

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* Par exemple : εἰς, ἀνά, ἐν, σύν, ἀπο, ἐυ, ἀντί, πρό, διά, κατά, μετά, ὑπέρ, ὑπο, παρα, ἐπί, πρός, περί, ἀμψί.

Malgré de rares exceptions et dans des cas très particuliers, que savent expliquer les philologues hellénistes, il ne faut jamais oublier, que, en composition, la terminaison du 2e composant est modifiée et aussi le genre grammatical, ἡ δραχμή, ῆς drachme, donne τετραδραχμος, ος, ον, de 4 drachmes, τὸ τετράδραχμον, ου tetradrachme.

Prenons l'exemple de mots dont le 2e composant est tiré de τὸ γράμμα, ατος. Il faut écrire *Pleurogrammus* (τὸ πλευρον, ου, côté), *Hexogrammus* (ἓξ six) ; mais *Diagramma*, parce que διά est une préposition.

Prenons l'exemple de mots dont le 2e composant est tiré de ἡ κεφαλή, ῆς tête ; ils ne se terminent pas par κεφαλη (latin *cephala*), mais par κεφαλος; les grecs disaient ὁ κυνοκέψαλος, ου, (lat. *cynocephalus*), ὁ βουκεφάλος, ου, ou bien ὁ βουκεφάλας, α, masculin (latin *bucephalus*) et l'adjectif était βουκέφαλος, ος, ον, jamais βουκέφλαλα (au nominatif singulier) ; *Cynocephalus* est correct, *Globicephala* est incorrect.

Prenons l'exemple de mots dont le 2e composant est tiré de τὸ κέρας gen. κέρατος ou κέρως, corne ; les grecs disaient δίκερως, ως, ον, τρίκερως, ους, ον, (mais non δίκερας, τρίκερας) ; ils disaient ὁ ῥινοκέρως, ωτος, rhinocéros.

Tous le noms composés créés par les zoologistes et paléontologistes et se terminant en *ceras* sont donc incorrects, mais il n'est pas question de les corriger, maintenant qu'ils sont depuis longtemps en usage.

La formation des mots composés en grec n'est pas simple, il peut y avoir des apocopements, des lettres de liaison, des redoublement de lettres[ø], des élisions, etc.

De nombreux ouvrages ont été publiés sur ce sujet, il serait bon qu'ils soient consultés avant une rédaction définitive de l'article 28.

[ø] Les zoologistes oublient trop souvent que, lorsqu'ils forment un mot composé dont le premier terme est tiré de καλός, ή, όν beau, ils doivent observer le redoublement du λ et faire commencer le mot par *calli* . . . , *callo* . . . , avec 2 l.

DOCUMENT 25/11

(*continued from page* 740)

The Designation of Official Names for Higher Taxa of Invertebrates

(Commission Reference : Z.N.(S.) 1242)

By **B. G. CHITWOOD**

(*Laboratory of Comparative Physiology and Morphology* of the Kaiser Foundation, University of California, Berkeley, California, U.S.A.*)

(Enclosure to a letter dated 27th March 1958)

Introduction

In the course of a recent review of the higher taxa of nemas (nematodes) and related organisms, the writer has recognised many problems of a nomenclatural nature. Some of these bear on the entire policy of selection and designation of such names, as proposed by pp. 59 × 69, *Copenhagen Decisions on Zoological Nomenclature* and Article 12, *Bull. zool. Nomencl.* **14** : 92–94. As the writer understands it, the *Official Lists* of Phyla, Classes and Orders are to be agreed upon by committees of specialists and passed upon by vote of the International Commission on Zoological Nomenclature.

The field of zoology is so broad that specialists seldom, if ever, are familiar with all of the names of higher taxa and the circumstances under which they were proposed—outside of their own specialties. A clear need, then, for the satisfactory functioning of the proposed committees, is a constant interchange of findings among zoologists.

A comparison of the Copenhagen Decisions with the *International Code of Botanical Nomenclature* may be helpful in considering these nomenclatural problems. Whereas, in zoology, all names for purposes of priority begin 1st January 1758 (with one or two exceptions), in botany the dates accepted for purposes of priority depend upon the group (Lanjouw, *et al.*, 1956). The table below demonstrates this :

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* Contribution No. 18.

Publication	**Groups**
Linnaeus, " Species Plantarum ", ed. 1, 1st May 1753	Spermatophyta, Pteridophyta, Sphagnaceae, Hepatacea, Lichenes, Algae (with exceptions below), Myxomycetes, Bacteria
Hedwig, " Species Muscorum ", 31st Dec. 1801	Musci (Sphagnaceae excepted)
Persoon, " Synopsis Methodica Fungorum ", 31st Dec. 1801	Fungi (Uredinales, Ustilaginales, Gasteromycetes)
Fries, " Systema Mycologicum " v. 1, 1st Jan. 1821	Fungi Caeteri
Ralfs, " British Desmideae ", 1848	Desmidaceae
Hirn, " Monographie und Iconographie der Oedogoniaceen ", *Acta Soc. Sci. Fenn.* **27**(1), 1900	Oedogoniaceae
Gomont " Monographie des Oscillariées ", *Ann. Sci. Nat. Bot. VII* **15** : 263–368 ; **16** : 91–264, 1892–1893	Nostacaceae Homocysteae
Bornet and Flahault, " Revision des Nostacacées hétérocystées ", *Ann. Sci. Nat. Bot. VII.* **3** : 323–381 ; **4** : 343–373 ; **5** : 51–129 ; **7** : 177–262, 1886–1888	Nostacaceae Heterocysteae

The writer believes that this action showed considerably more wisdom than the action of zoologists in dating all priority of animal names to the Tenth Edition of Linnaeus's *Systema Naturae*, 1st Jan. 1758 (exception : 1 pre-1758). The present year marks only the 200th anniversary of the beginning of official systematic nomenclature in Zoology—the microscope has been in general use little longer. In fact, the taxonomy of many of our groups is in its infancy, or at most in its adolescence. Thus we find the Kingdoms Animalia and Plantae recognised by most workers, though even in this case we must note that Linnaeus's dichotomous separation is contested today by many sound biologists.

In the Tenth Edition of the *Systema Naturae*, Linnaeus proposed the Kingdom Animalia (p. 9) which he divided into six classes : Mammalia (p. 12), Aves (p. 12), Amphibia (p. 12), Pisces (p. 12), Insecta (p. 13) and Vermes (pp. 13 and 641). Of these, the Classes Mammalia, Aves, and Pisces have survived with minor alterations. The Class Amphibia has been retained nomenclaturally with the Class Reptilia separated out. The Class Insecta has survived nomenclaturally for the majority of entomologists ; and the vernacular term insect (modified according to language) is universal, even though the group as originally proposed is nearly ludicrous in the eyes of present day zoologists. (Because of the motley assortment of organisms originally included in the Class Insecta by Linnaeus, many sound entomologists prefer the more exact name Hexapoda.) Linnaeus' Class Vermes can hardly be accepted in the light of today's knowledge. Since it contained segmented and unsegmented worms, some arthropods, coelenterates, sponges, protozoa and even mollusca, it has been dropped by the majority of present day workers.

The subdivisions or orders of Vermes included : Intestina (p. 647) [including *Gordius*, *Furia*, *Lumbricus*, *Ascaris* (all p. 648), *Fasciola* (p. 648), *Hirudo* (p. 649), *Myxine* (p. 650) and *Teredo* (p. 651)] ; Mollusca ; Testacea ; Lithophyta ; (all p. 642) and Zoophyta (p. 643). Most of these ordinal names have, like the Class, disappeared from the literature because of the unsatisfactory groupings involved.

Unquestionably, the botanists' method of priority dating permits much more correlation between nomenclature and advances in taxonomy than does the scheme in use by zoologists.

For convenience, the writer has divided the rest of this article into Early History (1808–1896) and Recent History (1900–1958) of Higher Taxa ; Discussion of Higher Taxa ; and Uniform Endings for Higher Taxa.

Early history of taxa of unsegmented worms

In 1808–1809, Rudolphi proposed a Class Helmintha (pp. 252, 324, and 55 resp.), subdividing it into five orders : Trematoda (p. 251), Cestoidea (v. 2(2) pp. 18, 222), Cystica (v. 2(2) p. 215), Nematoidea (p. 252), and Acanthocephala (pp. 251, 356). His Class Helmintha was patently artificial, since it was defined as internally parasitic [in animals] worms. It is no longer used, except in a vernacular sense, by zoologists. His orders Trematoda and Cestoidea were somewhat natural groups (though the former contained leeches), and have been preserved in a modified condition up to now. His order Cystica was admitted to be a possibly artificial group at the time of its proposal and, with the advance in knowledge of tapeworm life histories, has been dropped. The order Acanthocephala has been promoted, first to class, then to phylum rank.

Rudolphi's fifth order, Nematoidea, was less fortunately constituted. He apparently held to his overall diagnosis of the Helmintha and omitted all "free-living" and plant parasitic species, together with the free-living stages of animal parasites—apparently because the life histories of many of these were unknown at the time. The matter is quite confusing. On pp. 55–56 of volume 2 (1809), he definitely stated that he omitted the genus *Gordius* and that there had been a great deal of confusion between gordiids and nematoids. Unfortunately, so far as the writer has been able to determine, he gave no physical or structural means of distinguishing between them. He transferred many species originally described in the genus *Gordius* Linn., 1758 (pp. 644, 647) to the genus *Filaria* Mueller, 1787 (pp. 64–67); we can only conclude that his separation was based on whether or not the specimens were collected from other invertebrates. Thus he did not distinguish between mermithids and gordiids. The lack of knowledge relative to the free-living part of the life history of "horse-hair worms" and "cabbage worms" was the primary cause of the difficulty. By the same token, Rudolphi omitted the genus *Anguina* Scopoli, 1767 (p. 373, parasitic in plants), as well as the genus *Vibrio* Mueller, 1773 (pp. 39–49) in which the vinegar and paste eels had been described.

The ordinal name Nematoidea has been explained as being derived from the Greek noun *νῆμα, νηματος*, plus the noun *εἶδος*, yielding the meaning *thread-form* or *thread-like*. (Rudolphi obviously avoided the classic Greek adjective *νηματῶδης* meaning *in filaments* or *filamentous*.) An interesting sidelight in the history of the word nematode has been offered by Dr. Dougherty, who has informed the writer that modern Greeks now use the word *νηματῶδης* for an unsegmented roundworm in the vernacular sense; and another Greek word *ἰνῶδης* [m.f.], *ἰνῶδες* [n.] for the adjectival meaning *sinewy* or *fibrous* [? loosely filamentous]. This is beside the point in the present discussion, however, since Rudolphi could not have known about modern Greek usages, though he was quite a scholar of classic Greek.

De Blainville (1816, pp. 105–127) divided the Animal Kingdom into three Subkingdoms: Artiomorphes (p. 107); Rayonnes or Actinomorphes (p. 107); and Hétéromorphes (p. 107). In his Artiomorphes he divided into Types:

I. Vertebrés or Ostéozoaires and

II. Invertebrés or Anostéozoaires;

and further divided the latter into Subtype Malacozoaires, Subtype Entomozoaires and Subtype Articulés with the Append. Entomozoaires including the Class X Héxapodes (p. 107). [This is apparently the origin of the Class Hexapoda.] In his Subkingdom Rayonnes or Actinomorphes he included :

I. Subarticulate Classes—XVIII Annulaires and XIX Echinodermaires and

II. True Classes—XX Arachnodermaires, XXI Actinaires, XXII Polypaires, and XXIII Zoophytaires.

In his third Subkingdom, Hétéromorphes, he included Classes XXIV Spongiaires and XXV Agastraires. In more detail (p. 123), he grouped articulated or many-footed Hétéromorphes in " Cl. X–XVII, Insectes & Vers ". Members of the Subkingdom without lateral appendages were placed in " Cl. VIII Apodes (Vers Intestinaux, SubCl. I. Sang-Sues, SubCl. II. Entozoires " ; with a footnote stating that the latter group probably contained highly diversified animals, citing *Ascaris* and *Ligule*. Aside from the name Hexapodes and the limitation of insects, the writer sees little merit in this effort.

Cuvier (1817) divided the Animal Kingdom (v. 1) into several " Grandes divisions " :

Animalia vertebrata (p. 58)

Animalia mollusca (p. 59)

Animalia articulata (p. 60)

[v. 4] Animaux Rayonnés (p. 1)

les Zoophytes (p. 1).

Classes Echinodermes (p. 6) and Intestinaux (p. 26 = Entozoa Rudolphi), with the order Les Cavitaires (p. 28 = p. 29, Ent. Nematoidea Rud.), included such diverse genera as *Filaria*, *Hamularia*, *Trichocephalus*, *Oxyuris*, *Cucullanus*, *Ophiostomi*, *Ascaris*, *Strongylus*, *Liorhynchus*, *Prionoderma*, *Lernaea* and *Nemertes* Cuv. Cuvier also proposed :

Classe des Parenchymateux (p. 28), [including the families Acanthocéphales, Trématodes, Ténoïdes, and Cestoïdes],

Classe Acéphales,

Classe Polypes, and

Classe Infusoires (p. 89), [including the Order Rotifères (p. 89) as well as the Order Infusoires Homogènes (p. 92) in which he included *Cercaria*, various protozoans, *Vibrio glutini*, and *V. aceti* (p. 92)].

It is obvious from his groupings that the contribution was weak, to the extent that it dealt with unsegmented worms.

Lamarck (1817) divided unsegmented animals into ten classes, the Vermes (p. 131) being the fourth Classe des Animaux. He divided the Vermes into three Ordres:

VERS MOLLASSES [p. 145—subdivided into three Sections:

LES VESICULAIRES (Bicorne, Hydatide, Hydatigère, Cénure, and Echinocoque);

LES PLANULAIRES (Toenia, Bothryocéphale, Tricuspidaire, Ligule, Linguatule, Polystome, and Fasciole); and

LES HÉTÉROMORPHES (Monostome, Amphistome, Géraffle, Tétragule, Massette, Tentaculaire, and Sagittule)—all p. 146].

VERS RIGIDULES [p. 147—included Entozoa nematoidea Rud. v. 2, pp. 55–196 (Porocéphale, Echinorhinque, Strongle, Cucullan, Fissule, Oxyure, Trichure, Ascaride, Hamulaire, Liorhynque, Filaire, and Dragonneau [*Gordius*]—all on p. 147)].

VERS HISPIDES [p. 147—included Naïde, Stylaire, and Tubifex].

From the erratic grouping it is obvious this classification had no merit.

Later, De Blainville (1828) divided Onchocephala, (the Classe Entomozoaires Apodes or Vers, (p. 530)) into Ordres:

Ordre Oxycéphales (p. 534) [with genera including *Filaria*, *Gordius*, *Vibrio*, *Trichosoma*, *Ophiostoma*, *Sclerostoma*, *Physaloptera*, *Spiroptera*, *Thelazia*, *Liorhynchus*, and *Hamularia*];

Ordre Probocephala (p. 549) [with the Fam(illes) Acanthocephala (p. 550), Proteocephala (p. 552), and Sipunculidea (p. 533)];

Ordre Mycocephala (p. 555) [with the Fam(illes) Monocotyla (p. 556) and Polycotyla (p. 569)].

The Subclass Parentomozoaires or Subannélidaires (p. 573) be divided into:

Ordre Aporocephala (p. 573) [with Fam(illes) Teretularia (p. 573) and Planariae (p. 577)];

Ordre Porocephala (p. 580); and

Ordre Bothriocephala (p. 588) [with the Fam(illes) Polyrhynchia (p. 589), Monorhynchia (p. 596), and Anorhynchia (p. 600)].

While this classification probably contributed somewhat to the knowledge of flat worms and did group free-living nemas with the parasites, it did not aid in removing horse-hair worms from the same group as *Ascaris*, and the writer can see no merit in preservation of the name Oxycephala.

In 1828, Bory de Saint Vincent (p. 682) stated : " Rotiferae. Micr. Ordre ", fifth-class " Microsquopiques ".

In 1831 (1828), Ehrenberg divided the Phytozoa into the Polygastricha and Rotatoria, placing the Classis Rotatoria in the Polygastricha with :

Ordo Nuda [Sectio. Monotrocha, Schizotrocha, Polytrocha, and Zygotrocha] ;

Ordo Loricata [with the same Sectio.].

The Phytozoa Entozoa—Pseudo-polygastrica, Entozoa s. Suctoria, Pseudo-polygastricha were given the subdivisions :

(a) Nematoidea Pseudo-Polygastricha [genera *Amblyura* and *Anguillula* ; Familia Ascarideorum] ;

(b) Trematoda Pseudo-Polygastrica.

Classis Phytozoa Turbellaria was divided :

Ordo Dendrocoela

Ordo Rhabdocoela
    Sectio I. Amphisterea
    Sectio II. Monstera [Familia IV Gordiea]
    Sectio III. Amphiporina [" Familia VIII Nemertina, *Nemertes* (Cuvier), Familia Nemertinorum "].

In this article, Ehrenberg seems to have included free-living nemas in the Nematoidea and to have excluded horse-hair worms from the group for the first time. He proposed, as well, the Class Turbellaria ; and a family based on the genus *Ascaris*. Here also is found the first use of a higher taxon (Family) based on the genera *Nemertes* and *Gordius*, as well as the establishment of the name Rhabdocoela. Since Ehrenberg gave no morphologic means of separating *Gordius* from the Nematoidea, the present writer can see no reason for attributing the group to him. In 1837 (p. 235), Ehrenberg promoted the Nematoidea to class rank, including therein *Gordius*, *Anguillula*, and *Enchelidium*.

Von Siebold (1843, 1848) transferred many of the species originally described in the genus *Gordius* and transferred by Rudolphi (1809, 1818) to the genus *Filaria* back to the genus *Gordius* and to the genus *Mermis* Dujardin, 1842 (pp. 117–119). In 1843, von Siebold proposed the Order Gordiacea (pp. 302–303) [to contain *Gordius* and *Mermis*], placing it in the Class Helmintha (p. 302) together with the Orders Nematoidea (p. 310), Acanthocephala (p. 316), Trematoda (p. 316), Cestoidea (p. 328), and Cystica (p. 330). In 1848, both von Siebold (p. 112) and Leuckart (p. 77) emended the spelling of Rudolphi's Order Nematoidea to the Order Nematodes, including horse-hair worms in the order. Considerably later, Diesing (1861, p. 598) further emended the spelling of this ordinal name to Nematoda, and included horse-hair worms as well as free-living and plant-parasitic nemas in the group. The writer feels that both of these emendations of Rudolphi's name Nematoidea were entirely unjustified, both on linguistic and on scientific grounds, as previously noted.

É. Blanchard (1847, **7** : 106 ; **8** : 141) proposed the Classe Anevormi for the flat worms, including the nemertans. Thereafter, Leuckart (1848, p. 44) referred to the Vermes as a " Grosse Abteilung des Tierreichs ", and subdivided it thus :

Klassen	**Ordnungen**
Anenterati (p. 68)	Cestodes (p. 68) and Acanthocephali (p. 68)
Apodes (p. 70)	Nemertini, Turbellarii, Trematodes, and Hirudinei (p. 70)
Ciliati (p. 74)	Bryozoa (p. 74) and Rotiferi (p. 74)
Annelides (p. 75 = Annulati Burmeister excluding Nemertini)	Nematodes (p. 77), Lumbricini (s. Terricolae) (Scoléides M. Edw.) [to unit Abranches sétigerès Cuv. with Branchiaten] and Branchiati.

Leuckart's next " Grosse Abteilung " was the Arthropoda, followed by the Mollusca.

Van der Hoeven (1850) subdivided the Class Entozoa (p. 154) as follows :

Ordines	**Familiae**
Coelelmintha s. Parenchymatosa (p. 167)	Cystica (p. 167), Cestoidea (p. 169), Acanthocephala (p. 172), and Trematoda (p. 173)
Coelelmintha s. Utricularia (p. 176)	Nematoidea [including such diverse forms as Phalanx I Acanthotheca —*Pentastoma*, *Linguatula* (p. 176), and Phalanx II Strongyloidea, with various genera from *Rictularia* to *Odontobius* (pp. 177–178)].

He created an Appendix to Entozoa containing *Chaos redivivum* (p. 181) and the Family Gordiacea including *Gordius* and *Mermis* (p. 182). Van der Hoeven also recorded the Class Rotatoria (p. 183) and the Class Annulata (p. 194) with the Orders Turbellaria (p. 208), Suctoria (p. 213—with family Hirudinea), and Order Setigera (p. 217—with family Lumbricini).

Schultze (1851, p. 3) recognised the Classis Turbellaria Ehrenberg, with :

I. Subclassis Aprocta (Dies., 1850) Schultze, 1851
    Ordo Dendrocoela Ehr.
    Ordo Rhabdocoela Ehr.

II. Subclassis Proctucha (Dies., 1850) Schultze, 1851
    Ordo Arynchia ?Troschel, 1849 or Schultze, 1851
    Ordo Rhynchocoela (Nemertina) Schultze, 1851.

The next year (1852), he further subdivided the Nemertina (p. 183) into the Anopla (p. 183) and Enopla (p. 183) ; but the writer found no clear statement of the ranks of these groups, only that they were placed in the Turbellaria—presumably as suborders.

Vogt (1851) proposed the Class Nematelmia (pp. 174, 175)—including in it the Order Nematoidei (p. 181—excluding mermithids) ; the Order Gordiacei (p. 181—including *Mermis*) ; the Order Acanthocephala (p. 180) ; and the Order Gregarinidea (!) (p. 178). In the same article, he proposed the Class Platyelmia (p. 185)—to include the Orders Cestoidea (p. 190) ; Ligulida (p. 195) ; Taenida (p. 195) ; Trematoda (p. 197) ; Planarida (p. 205) ; Nemertina (p. 207—Nemertida, p. 209) ; the Class Rotatoria (p. 210) ; and the Class Annelida [(p. 217)—with the Orders Hirudinea (p. 224), Scoleina (p. 229), Gephyrea (p. 228), and Tubicola (p. 230)].

Huxley, in 1853 (1854, p. 16) and 1864, referred to the Class Rotifera. Leuckart (1859, p. 18) changed the name of his Apodes to Platodes. Gegenbaur (1859) placed the Rotatoria (p. 194) as a Classe of Arthropoda, subdividing as follows :

Ordnung Sessilia (p. 194)

Ordnung Natantia (p. 195).

He also used the name Classe Platelminthes (p. 137) with :

Ordnung Turbellaria (p. 137)

Ordnung Trematoda (p. 137)

Ordnung Cestoda (p. 137).

The Ordnung Turbellaria was subdivided (no ranks given) into :

Rhabdocoela [Rhynchocoela (Nemertina) and Arhynchia (p. 137)]

Dendrocoela (p. 137).

The Classe Nemathelminthes (p. 137) was subdivided into :

Ordnung Nematoidea [Gordiacei (*Mermis* and *Gordius*) and Nematoden (*Strongylus*, *Ascaris*, and *Oxyuris*), no ranks given—all p. 137]

Ordnung Acanthocephala (p. 137).

The Classe Annulata was subdivided into :

Ordnung Branchiata (*Vagantia* and *Tubicola*)

Ordnung Scoleina [p. 138, *Lumbricus*, *Chaetogaster*, *Nais*, *Enchytraeus*]

Ordnung Suctoria—Hirudinea

Ordnung Gephyrea.

Hyman (1951, p. 53) discussed the legitimacy of these emendations. The present suggested rule is the only basis on which the writer can see justification for the continued use of a phylum Platyhelmintha(-es) since Minot, who first limited the group as at present, used that spelling. Aside from reviving the phylum Vermes, Gegenbaur's groupings offered nothing original.

Huxley (1864) proposed a Class Scolecida (p. 47) for unsegmented worms, including therein the Orders Turbellaria, Trematoda, Taeniada, Nematoidea, Gordiacea, Acanthocephala, and Rotifera (p. 47). In the same article, he stated that he was doubtful whether these latter groups should be considered orders or classes, in a group of higher rank. At the time he gave no indication of how to distinguish between the Nematoidea and Gordiacea, though additional information had been obtained concerning them since Rudolphi (1808–1809). This is unfortunate, since later (1877, p. 679) Huxley reversed himself by including the Gordiacea within the Nematoidea.

The name Echinodera has been attributed by Zelinka (1928) to Gosse (1864, p. 403, n.v.) and the vernacular name Echinoderen to Graeffe (1869, n.v.).

Haeckel (1866, p. 400) proposed the ranks Phylum and Subphylum, giving the latter rank to the Vermes and including therein :

Cladus Scolecida (Helminthes)

Classe Platyelminthes

Ordnungen Turbellaria (—all p. LXXIX), Cestoda, Hirudinea, Onycophora (—all p. LXXX), and Nemertini (p. LXXXI)

Classe Rhynchelminthes

Ordnungen Gephyrea and Acanthocephala (—all p. LXXXII)

Classe Nematelminthes

Ordnungen Chaetognatha and Nematoda (—all p. LXXXII; including Gordiaceen, doubtfully, in the latter group)

Cladus Rotatoria (p. LXXXV).

Metchnikoff (1865) proposed the Order Gastrotricha (p. 450). This is one of the very few names of higher taxa that appears never to have been challenged, merely promoted—first to class, then to phylum, in more recent years.

Bütschli (1876, p. 392) named a group Nematorhyncha, placing within it the Gastrotricha and the Atricha [of equal rank, presumably orders in a class], the latter subdivision being for the reception of the genus *Echinoderes* Claparède, 1863. In a text figure, he represented the Annulata, Nemertina, Cestoda, Trematoda, Turbellaria, Rotatoria, Nematoda, Nematorhyncha, and Arthropoda as equal in rank and type size. He apparently derived the Annulata and Arthropoda from two extremes of the same original stock. On p. 406 he stated that, in his view, alignment of the " Tardigraden " with the "Arachnoiden " wholly failed. Further (p. 407), he stated that he must recognise the " Tardigraden " as "Arthropodenformen ". He then returned to comment of the comparison of the " Rotatorien, Nematorhynchen und Nematoden " as probably in the general line of ancestry of the "Arthropoden ". Though Bütschli did not so state, one can only conclude that he considered all of these groups as classes. In the writer's opinion, this is the most original and thought-provoking article among those here reviewed.

Minot (1876) stated that the Class Platyhelminthes (p. 19) was formerly divided into:

1. Turbellarians (Rhabdocoela, Dendrocoela, and Nemertines);
2. Trematodes; and
3. Cestods [*sic* !].

On p. 19, he officially removed the nemertines from the Class Platyhelminthes and, on p. 24, presented his own classification of the Class Platyhelminthes:

Rhabdocoela (Acoela, Apharyngea, Pharyngocoela [Rhabdocoela, Dendrocoela]);

Vaginiferae (Trematods [*sic* !] and Cestods [*sic* !]).

He stated he did not know where to place nemertans, but that they did not belong in this class.

Lankester (1877) promoted Vogt's class Platyelmia to phylum rank (p. 441) with the Classes Planariae, Nemertina, Trematoidea, Cestoidea, and Hirudinea (p. 444). At the same time, he promoted Rudolphi's order Nematoidea to phylum rank (p. 441), subdividing it directly into the families Ascaridae, Gordiidae, and Enoplidae (p. 449) ; and he recognised the Branch Rotifera.

The higher taxa Ectoprocta and Entoprocta are commonly attributed to Nitsche (1870) but, although he did name both groups (p. 34) and cited the derivation " *ἒντο* und *πρωχτός* ", he called the Entoprocta a Familie (p. 34) and relegated the remaining Bryozoen to the Ectoprocta. As far as the writer has determined, the first use above the family group for either name is that of Leuckart and Nitsche (1877, p. 133), where both groups were termed orders in the Class Bryozoa. In the same article, on p. 118, mention was made of the Order Nematodes.

Huxley (1877) apparently had undergone quite a change of thought since his 1864 article. In 1877, discussing the classification of invertebrates, he wrote of the :

Protozoa

I. Zoophytic Series (including Porifera and Coelenterata)

II. Annuloid Series (including the Trichoscolices as a Division which included the Turbellaria)

Annelida

III. Arthrozoic Series (composed of the Arthropoda and the Division Nematoscolices [further subdivided into orders : Rotifera, Nematorhyncha (Gastrotricha included), Nematoidea (included *Gordius* and *Mermis*), and ?Chaetognatha])

IV. Malacozoic Series (with the Polyzoa-Ectoprocta and Mollusca)

V. Pharyngopneustal Series (Tunicata and Enteropneusta)

VI. Echinodermata.

In another part of the same work he had :

Section I. Monera

Section II.	Porifera, Hydrozoa, Ctenophora (Coralligena)
Section III.	Turbellaria, Rotifera (Nematorhyncha), Trematoda, Cestoidea
Section IV.	Hirudinea, Oligochaeta, Polychaeta, Gephyrea
Section V.	Crustacea, Arachnida (Pycnogonida, Tardigrada, Pentastomida), Myriapoda, Insecta
Section VI.	Polyzoa, Brachiopoda, Lamellibranchiata, Odontotophora
Section VII.	Echinodermata
Section VIII.	Tunicata or Ascidioidea
Section IX.	Peripatidea, Myzostomata, Enteropneusta, Chaetognatha, Nematoidea, Physemaria, Acanthocephala, Dicyemida.

Apparently Huxley used a double system of classification in this publication, classifying according to what he considered immediate relationships (horizontally) and in series of evolutionary development (vertically). The influence of other workers' views, particularly some of Bütschli's, is evident.

It was not until 1886 that Vejdovský proposed the ordinal name Nematomorpha (p. 427) for the horse-hair worms and demonstrated how they could be separated from the Nematoidea. He removed them entirely from the latter vicinity, placing the order in the Annelida.

Reinhard (1887, p. 401) proposed the Class or Order Kinorhyncha, to include the genus *Echinoderes* Claparède, 1863. Dewitz (1892) classified the unsegmented parasitic worms in the (?) Class Platodes or Platyhelminthes (p. 1) ; mentioning the Cestodes (p. 2), the Trematodes (p. 102), and the (?) Class Nemathelminthes (p. 1) with the Nematodes and the Acanthocephali. He is credited by some authors with having excluded the nemertans from the Platyhelminthes for the first time, but since the title of his book would not justify their inclusion, and no mention of them is found therein, the present writer cannot affirm the credit.

Hatschek (1888) subdivided the Metazoa into the Protaxonia (= Coelenterata) and the Heteraxonia (Bilateria). The latter he grouped as Type Zygoneura, Sub-Type Autoscolecida (= Protonephridozoa) with the Cladus Scolecida (p. 40). He proposed Classes Platodes, Rotifers, Entoprocta, Nematodes, Acanthocephala ; and Appendage Nemertini (all p. 40), in contrast to Sub-Type Aposcolecida (= Metanephridozoa) which included the Annelida, Onycophora, Arthropoda, Pharonida, Bryozoa (Ectaprocta) as classes ; and the Cladus Mollusca.

Haeckel (1894, p. 90) divided the four Kingdoms of the Organic World as follows [his Hauptclassen for the Protophyta, Metaphyta, and Protozoa are not shown in the table below] :

Kingdoms	**Phyla**	**Hauptclassen**
I. Protophyta	1. Archephyta	
	2. Algariae	
	3. Algettae	
II. Metaphyta	4. Thallophyta	
	5. Diaphyta	
	6. Anthophyta	
III. Protozoa	7. Archeozoa	
	8. Fungilla	
	9. Rhizopoda	
	10. Infusoria	
IV. Metazoa		
IVa. Coelenterata or Acoelomaria	11. Gastereades	
	12. Spongiae	
	13. Cnidaria	
	14. Platodes	(1) Turbellaria, (2) Trematodes, (3) Cestodes
IVb. Bilateria or Coelomaria	15. Helminthes	(1) Rotatoria, (2) Strongylaria, (3) Rhynchelminthes, (4) Prosopygia
	16. Mollusca	
	17. Articulata	(1) Annelida, (2) Crustacea, (3) Tracheata
	18. Echinoderma	
	19. Tunicata	
	20. Vertebrata	

Haeckel very soon (1896) saw the need for expansion and revision of this system as it applied to animals and classified invertebrates. He suggested nine phyla as follows :

Phylon Gastraeda

Phylon Spongiae (Porifera)

- Phylon Cnidaria (Acephalea)

- Phylon Platodes (= Plathelminthes, p. 238)
  - Classe Platodaria (pp. 239, 346, = Archelminthes, p. 248)
    - Order Archicoela (pp. 246, 249)
    - Order Pseudacoela (p. 246 = Acoela, p. 240)

  - Classe Platodinia (= Plathelminthes, pp. 246, 252)
    - Order Turbellaria (pp. 246, 253)
    - Order Trematoda (pp. 246, 255)
    - Order Cestoda (pp. 246, 255)

- Phylon Vermalia (= Helminthes, p. 261)
  - Cladoma Rotatoria (= Trochelminthes, p. 264)
    - Classe Provermalia (= Archipygia, p. 264, hypothetical)
    - Classe Gastrotricha (p. 264)
    - Classe Trochozoa (= Trochophoralia, p. 264)
    - Classe Rotifera (= Räderthiere, p. 264)

  - Cladoma Prosophygia (= Brachelminthes, p. 264)
    - Classe Bryozoa (= Polyzoa, p. 264)
    - Classe Brachiopoda (= Spirobranchia, p. 264)
    - Classe Phoronaria (= Phoronia)
    - Classe Sipuncularia (= Gephyrea, p. 264)

  - Cladoma Strongylaria (= Nemathelminthes, p. 264)
    - Classe Echinocephala (p. 264, = Kinorhyncha auct. insert.)
    - Classe Acanthocephala (p. 264)
    - Classe Nematoda (p. 264)
      - Subclasse Ascarideen (p. 299)
      - Subclasse Gordiaceen (p. 299)

    - Classe Chaetognatha (p. 264)

  - Cladoma Frontonia (= Rhynchelminthes, p. 264)
    - Classe Nemertina (p. 264)
    - Classe Enteropneusta (p. 264)
    - Classe Prochordonia (p. 264)

- Phylon Chordonia

  - Subphylum Tunicata

- Phylon Echinodermen

Phylon Mollusken

Phylon Articulaten
- Cladoma Annelida
    - Classe Archannelida
    - Classe Chaetopoda
        - Order Protochaeta
        - Order Polychaeta
        - Order Oligochaeta
        - Order Spaniochaeta
    - Classe Stelechopoda
        - Order Myzostomia
        - Order Arctisconia (= Tardigrada)
        - Order Linguatonia
- Cladoma Crustacea
- Cladoma Tracheata.

Finally, Braun (1889, p. 224) quoted Gegenbaur as having used the Ordo Scolecina (Vogt) in the " Classis Annulaten ".

Recent history of higher taxa of unsegmented worms

Lankester (1900, p. 5) divided the Grade Coelomocoela into the phyla Platyelmia, Nematoidea, Echinoderma, Chaetognatha, Vertebrata, Appendiculata, Mollusca, Nemertina, and Acanthocephala ; and the Subphylum Rotifera. The next year Benham (1901, p. 159), in Lankester's own Treatise on Zoology, recognised the Phylum Rhynchocoela with the Class Nemertina, Branch Dimyaria, Orders Protonemertini, Mesonemertini, and Metanemertini ; and the Branch Trimyaria with the Order Heteronemertini. He considered the Anopla and Enopla of Schultze unnecessary groups.

Ward (1903) subdivided the Phylum Nemathelminthes (p. 205) into the Class Nematoda (p. 205), with the Subclasses Eunematoda (p. 205), and Gordiacea (p. 205) ; and the Appendix Acanthocephala (pp. 205, 224). No orders were recognized in these groups.

Von Linstow (1905) divided the Class Nematoda into the Ordnungen Secernentes (p. 272), Adenophori, Resorbentes, and Pleuromyarii (p. 273) ; basing them primarily on the excretory system, secondarily on the musculature and hypodermis. The diagnoses of the first two orders were eminently satisfactory, as were his included genera. The second two orders, however, were based on what we now know to be misinterpretations, and his included genera were less uniform. In 1909 he gave additional examples of all four of his orders, but, by limiting the examples to animal parasites and basing his information both upon his own and other misinterpretations, he brought considerable discredit on his classification.

Zelinka (1907, pp. 131, 135) used the name Echinoderida, without designating rank. He clearly intended it to be a superordinal taxon, however, since he included the Ordnungen Homalorhagae (p. 135), Conchorhagae (p. 135), and Cyclorhagae (p. 136) ; with the Suborders Nomosomata (p. 136) and Xenosomata (p. 136). He had previously used several of these names without specifying ranks.

Bütschli (1910) proposed the Subphylum Amera (p. 37) as a division of the Phylum Vermes (p. 37) and placed therein :

- Klasse Platyhelminthes (p. 37)
  - Subclass Turbellaria (p. 37)
  - Subclass Trematoda (p. 37)
  - Subclass Cestodes (p. 38)
  - Subclass Nemertina (p. 38)
- Klasse Nemathelminthes (p. 38)
  - Subclass Rotatoria (p. 38)
  - Subclass Nematorhyncha (p. 38)
    - Order Gastrotricha (p. 38)
    - Order Echinodera (p. 38)
- Klasse Nematodes (p. 39)
    - Order Eunematodes (p. 39)
    - Order Gordiida (p. 39)
  - Subclass Acanthocephala (p. 39)

Grobben (1909) recognised the Subkingdoms Protozoa and Metazoa. The latter he divided as follows :

Division (a) Coelenterata

Phyla Spongiaria, Cnidaria, Ctenophora

Division (b) Coelomata

- Phylum Protostomia (Zygoneura)
  - Kladus Scolecida
    - Klassen Platyhelminthes, Aschelminthes, Entoprocta, Nemertini
  - Kladus Annelida
  - Kladus Arthropoda
  - Kladus Mollusca
  - Kladus Molluscoidea

- Phylum Deuterostomia
  - Subtype Amulacralia
    - Kladus Echinodermata
    - Kladus Enteropneusta
  - Subtype Homalopterygia
    - Kladus Chaetognatha
  - Subtype Chordonia
    - Kladus Tunicata
    - Kladus Acrania
    - Kladus Vertebrata
      - Klassen Cyclostomata, Pisces, Amphibia, Reptilia, Aves, and Mammalia (with the last four grouped by the unofficial designation Tretapoda).

Grobben's Klasse Aschelminthes contained the Rotatoria or Rotifera, Gastrotricha, Kinorhyncha, Nematoda, Gordiacea, and Acanthocephala.

Poche (1911) divided the Kingdom Animalia (p.67) into Supersubkingdoms, Subkingdoms, Phyla, Subphyla, Supersuper Klassen, Super Klassen, and Klassen. In his system, our unsegmented worms came under the following classifications :

- Subkingdom Coelomatodea (p. 87)
  - Subsubkingdom " Coelomatali, 1877, p. 441 " (p. 88)
    - Supersuper Phylum Zygoneura
      - Phylum Platodaria (p. 89)
        - Subphylum Platodes
          - Klassen Planarioidea, Cestoidea
        - Subphylum Nemertarii (p. 90)
          - Klasse Nemertoidea
      - Phylum Articulata
        - Subphylum Vermarii (p. 91)

- Supersuper Klasse Rotiferomorpha
  - Klassen Gastrotricha, Rotifera (pp. 91, 92)
- Supersuper Klasse Echinoderomorpha
  - Super Klasse Echinoderoidea
- Supersuper Klasse Gordiomorpha
  - Klassen Gordioidea Tratsach, 1889, p. 20; Nectonematoidea (p. 93)
- Supersuper Klasse Tardigradomorpha
  - Klasse Tardigrada Sieb., 1848, p. 506 (r. 94)
- Supersuper Klasse Vermomorpha
  - Super Klasse Vermes
    - Klassen Dinophiloidea, Histriobdelloidea, Annulata
    - Subsuper Klasse Gephyrea
      - Klassen Echiuroidea, Epithetosomatoidea, Priapuloidea, Sipunculoidea
- Subphylum Peripatorii
  - Klasse Onycophora
- Subphylum Linguatularii
  - Klasse Linguatuloidea
- Subphylum Arthropoda
  - Super Klasse Carcinomorphae
    - Subsuper Klasse Carcinomorphi
      - Klasse Carcinoidea
    - Subsuper Klasse Pycnogonomorphi
      - Klasse Pycnogonoidea
    - Subsuper Klasse Arachnomorphi
      - Klasse Arachnoidea
  - Super Klasse Tracheata
    - Subsuper Klasse Progoneata
      - Klassen Pauropoda, Diplopoda, Insecta
- Phylum Nemathelminthes (p. 101)
  - Klasse Nematoidea Rud., 1808, p. 252, 1809, p. 324
- Phylum Acanthocephalaria (p. 101)
  - Klasse Acanthocephaloidea

Phylum Bryozoaria
  Supersubphylum Actinotrochariae
      Klasse Actinotrochoidea

  Supersubphylum Bryozoa
    Subsuperphylum Ectoproctadae
      Klasse Ectoprocta Nitsche, 1869, p. 34

    Subsubphylum Entoproctadae
      Klasse Entoprocta Nitsche, 1869, p. 34.

Ward (1917) further subdivided the Eunematoda into the Suborders Myosyringata (p. 9) and Trichosyringata (p. 9).

Cobb (1919) proposed the Phylum Nemates (p. 214), listing " Nematoidea sensu restricto " as a synonym ; at the same time proposing :

Subphylum	**Class**	**Subclass**	**Order**	**Representative Genus or Genera**
Alaimia	Alaima	Manitinia	Litinia	*Bastiania*
		Kinetinia	Bolbinia	*Laxus*
Laimia	Anonchia	Anodontia	Cytolaimia	*Monhystera*
			Isolaimia	*Rhabdolaimus*
			Polylaimia	*Bathylaimus, Plectus*
		Odontia	Apodontia	*Axonolaimus*
			Synodontia	*Teratocephalus*
	Onchia	Homonchia	Synonchia	*Enoplus*
			Mesonchia	*Fimbrilla* (?)
			Aponchia	*Chromadorella*
			Triplonchia	*Tylenchus*
		Heteronchia	Axonchia	*Dorylaimus*
			Anaxonchia	*Oncholaimus*

(All representative genera in the above table were found on p. 216 of Cobb's 1919 publication ; all higher taxa on p. 214.)

Since Cobb plainly stated (p. 216) that the representative genera were temporary, and the type genera were to be designated later, those he cited cannot be regarded as type genera. In 1920, he published new genera in all of his orders ; usually where one genus has the same stem as the ordinal name, such a genus might conceivably be designated type genus, but Cobb did not do so. This is a very awkward business because, by designating by selection any genus listed as a representative genus in 1919 or described in 1920 in the Order, one could have sufficient orders to accommodate the greater part of the nemic genera ; with a very few exceptions, Cobb's (1919–1920) orders, classes, and subclasses would have priority. However, in every single case, between his 1919 and 1920 articles, Cobb mixed up his subphyla, classes, subclasses, and orders to such an extent that he appeared ridiculous.

Cobb's great contribution was the naming of the phylum Nemates (p. 214) and excluding all other types of organisms (including gordiids) from it. Cobb definitely deserves the credit for first recognising the group as a phylum and making the logical exclusions. The writer feels that even Dr. Cobb would approve of the suppression of all his other higher taxa to the cause of the phylum name Nemates (or the emended name Nemata). In 1931, Cobb gave a satisfactory diagnosis of the phylum Nemates by his criticism of zoologists for their mishandling of the group. While it was not the best way to " win friends and influence people ", Cobb at that time had fought for his concepts, including the use of the vernacular word *nema* and its derivatives, since 1917, when he first introduced it. The writer, having been one of his employees at the time he wrote his polemic (1931) and his article on the " English Word 'Nema' " in 1932, knows he retired with a feeling of defeat, having converted so few people to his views. Dr. Cobb, in the writer's opinion, was one of the greatest zoologists of any age. The recognition of his phylum Nemates (emended Nemata) is the least that we can do to make up for his " persecution " during his life. Upon Cobb's retirement and death, neither the present writer, nor his other former associates, were convinced that the group warranted phyletic rank. In the face of a united front from the parasitologists, the writer himself did not feel up to battling for Cobb's views. It has only been recently, after a survey of the literature, that the writer, being convinced of Cobb's correctness in this regard and desiring to see belated justice done, has taken up the cause. Although it has no bearing on official zoologic nomenclature, the writer would like to note in passing that the word *nema* is now in Webster's New International Dictionary, Unabridged (1954, p. 1639).

In the period from 1913 to 1916, several workers were active in proposing superfamilies and suborders of nemas ; particularly Railliet and Henry in France and Skrjabin in Russia ; later, Travassos in Brazil. These names, as well as those that followed, were primarily higher taxa of animal parasites, and were based on generic names and presumptive type genera. Since we tend to follow priority in these cases, no discussion is necessary (except for the " homonymy " of the names in series [see p. 885 of the present article]).

In 1926, Yorke and Maplestone published a book on the nemic parasites of vertebrates, in which they divided the Class Nematoda Rud., 1808 emend.

Dies., 1861 into the orders Eunematoda Ward, 1916, and Gordiacea Siebold, 1848 (all on p. 15). Within the order Eunematoda they went directly to the superfamilies Rhabdiasoidea (p. 26), Trichuroidea (p. 20), Strongyloidea (p. 33), Dioctophymoidea (p. 176), Oxyuroidea (p. 181), Ascaroidea (p. 254), Spiruroidea (p. 288), and Filarioidea (p. 387)—all of these groups being attributed to previous authors.

Baylis and Daubney also came out with a book in 1926, in their case treating the families and genera of the Class Nematoda. Within the class they recognised five orders : Ascaroidea (p. 1), Strongyloidea (p. 150), Filarioidea (p. 193), Trichinelloidea (p. 237), and Dioctophymoidea (p. 235). They, like Yorke and Maplestone, attributed all their higher taxa to previous authors (even though several of the prior usages of the words had been at the superfamily level) ; but they omitted suborders and superfamilies, proceeding directly to the families. They deserve credit for assembling the information on all types of nemas. Their handling of free-living forms, however, was quite inadequate.

In 1929, Filipjev suggested a much more satisfactory classification of the Nematoda, recognising 11 orders : Anguillulata (p. 284), Enoplata (p. 284), Chromodorata (p. 284), Desmoscolecata (p. 285), Monhysterata (p. 285), Dioctophymata (p. 285), and Trichurata (p. 285). No authorships were cited for any of these orders ; but the second to fifth, inclusive, were definitely new. The stems of the remainder of the names had all be used for higher taxa by other authors previously—mostly for suborders with the same spellings, though in one or two cases, with the -oidea ending, for superfamilies.

Rauther (1930a) proposed a classification of the Class Nematodes—Nematoidea (p. 249), in which he divided them into two orders :

- Order Hologonia (p. 365)
  - Suborder Dioctophymoidea (p. 365)
  - Suborder Trichuroidea (p. 366)
- Order Telogonia (p. 367)
  - Suborder Filaroidea (p. 367)
  - Suborder Strongyloidea (p. 375)
  - Suborder Ascaroidea (p. 379).

Rauther's chief division was based on the origin of germ cells in the reproductive system. As such it worked rather well ; but we now know that though the forms grouped under Hologonia are related, similar origins of germ cells occur occasionally in forms placed in his Telogonia, and that certain telogonic forms are more closely related to some of the hologonic forms (trichuroids) than the two suborders of Hologonia are to each other. As a consequence these names have been dropped, but with no discredit to the author. As a matter of fact, his handling of free-living nemas was definitely superior to that of Baylis and Daubney (1926), though not as good as that of Filipjev (1929). Rauther (1930b) also classified the Class Nematomorpha (p. 403) into two orders: Gordioidea (p. 445) and Nectonematoidea (p. 446).

Potts (1932), possibly stimulated in part by Cobb's (1931) article, promoted the Nematoda (p. 209) and Rotifera (p. 204) to phylum rank. Shortly thereafter (1935) he also promoted the Nematomorpha (p. 527) to phylum rank.

DeConinck and Stekhoven (1938) published a classification of free-living nemas very similar to that of Filipjev (1929), but using the -oidea ending for orders. They listed the Chromadoroidea (p. 25), Monhysteroidea (p. 25), Araeolaimoidea (p. 93), and Enoploidea (p. 25) as orders. No suborders and superfamilies were proposed.

Stimulated by Filipjev's work, the writer and M. B. Chitwood (1933) proposed a division of the Class Nematoda into two subclasses: Phasmidia (p. 131) and Aphasmidia (p. 131); basing their classification primarily upon the nervous system (phasmids) but citing other systems as supplementary. Later (1937), the present writer offered the complete classification down to superfamily (listing families) and, with M. B. Chitwood (1937), gave a more extended account. It was not until 1940 that M. B. and B. G. Chitwood realised their subclasses were actually synonyms of von Linstow's (1905) orders Secernentes (p. 127) and Adenophori (p. 132), and so indicated. In the meantime Pearse (1936) had promoted the subclasses to classes Phasmidea (p. 10) and Aphasmidea (p. 10). The writer (1940, p. 202) came to the conclusion that the phylum Nemata as proposed by Cobb was a valid group, and that the subclasses Phasmidia and Aphasmidia should take the rank of classes. Therefore it is reasonable to say that, though continuing to use the Phasmidia and Aphasmidia in other chapters of the book, M. B. and B. G. Chitwood promoted the Secernentes and Adenophori to the ranks of class in 1940.

Pearse (1942) made several new subclasses: Rhabditia (p. 137), Spiruria (p. 146), Enoplia (p. 155), and Chromadoria (p. 136). He recognised the following orders:

Rhabditida Chitw., 1933, p. 131

Strongylida [Looss, 1911] Sprehn, 1927 [Baylis and Daubney, 1926] Pearse, 1942, p. 136

Ascarida [Baylis and Daubney, 1926] Sprehn, 1927, Pearse, 1942, p. 136

Spirurida Chitw., 1933, p. 135
Dioctophymatida Pearse, 1942, p. 158
Dorylaimida Pearse, 1942, p. 156
Monhysterida, p. 136
Camallanida [(Chitw., 1937)] Pearse, 1942, p. 146
Spirurida [(Railliet and Henry, 1915)] Chitw., 1933, p. 131.

He also promoted many of the previous superfamilies to subordinal rank, and thereby formed many more " homonyms " [see p. of the present discussion].

Thorne (1949) proposed the Order Tylenchida (p. 37) and several other promotions in lower ranks. Orders and suborders of both " free-living " and plant-parasitic nemas have been proposed since—with great diversity in endings, re-emphasising the need for prescribed endings [see p.].

In 1950, the writer unfortunately did not follow the 1940 decision that the names Phasmidia and Aphasmidia were rightfully synonyms of Secernentes and Adenophori, although the statement referring to this was left in the revision of his book. In the preface, however, he excused himself for not making the changes in nomenclature (at that time particularly uniform endings), because of the number of changes that would be necessary. He also failed to use the phylum name Nemata, continuing to use the name Nematoda. This whole matter was an unwillingness to flaunt zoologic public opinion, since at the time he was also aware that the very name Phasmidia was a homonym of an insect group. He did, however, characterise the Subkingdom Scolecida (p. 204), mention the name Aschelmintha (p. 199), and place the Vermes Amera (p. 203) as an alternative name for the Scolecida. (Whether this constitutes promotion of the Amera Bütschli, 1910, to Subkingdom rank is a matter for the International Commission to pass upon.)

Discussion of higher taxa

(a) Subkingdom.—Our discussion must, of necessity, begin with the subkingdom. Whether or not Scolecida (Huxley, 1864) Chitw., 1950 is a homonym of the Ordnung Scoleina Vogt, 1851 (for Oligochaeta) is a question for the International Commission to decide. Vogt did not cite his derivation. There are a number of Greek words with similar stems that have been used in zoology, including σκώληξ, scolex, *worm*, stem scolec-, and σκώλος, *thorn* or *prickle*, stem scol-. Either word might be applied to oligochaetes. In quoting Gegenbaur (1859, p. 138), Braun (1889, p. 224) purposely or inadvertently emended the spelling of Vogt's name to Scolecina. Assuming it is ruled that Scolecida Huxley, 1864, is a homonym of Scoleina Vogt, 1851, then Amera

Bütschli, 1910, becomes the first available synonym. Whether or not the present writer (1950, p. 203) effected its promotion to subkingdom by mentioning Vermes Amera as an alternative name, is a matter of opinion.

(b) **Phylum Names.**—The phylum names Nemerta [[(Oersted, 1844)] Lankester, 1900] Chitw., 1950, p. 199, and Rhynchocoela (Schultze, 1851) Benham, 1901, are up for ruling or choice. In this case it is clear that Lankester (1900, p. 5) first promoted the Nemertina to phylum rank; but Benham (1901, p. 159)—in Lankester's own series, presumably with the editor's permission—promoted the Rhynchocoela to phylum rank, preserving the Nemertina at class level.

The phylum names Echinodera and Kinorhyncha are another case for choice. Pearse (1936, p. 10) promoted the Echinodera to phylum rank, and placed Kinorhyncha in parenthesis. The Kinorhyncha is preferred by many because of the similarity of the name Echinodera to Echinoderma or Echinodermata.

The phylum names Nemata [[(Rud., 1808 ?)] Cobb, 1919] Pearse, 1936, p. 10; Nematoidea (Rud., 1808) Lankester, 1877, p. 441, restricto Cobb, 1919, p. 214; and Nematoda (Diesing, 1861) Potts, 1932, p. 209, are subject to a ruling. In this case the writer, on the grounds of the derivation of the word, can see no justification for the name Nematoda. He would prefer to see the matter settled objectively by a committee of specialists being appointed to examine, if possible, the specimens placed by Rudolphi in the genus *Filaria* and transferred by von Siebold to *Gordius* and *Mermis*. If von Siebold was correct, and some of these were nematomorphs, the phylum Nemata would be the obligatory name. If Rudolphi was correct, and they really are not nematomorphs, the phylum Nematoidea would be obligatory.

The names for the phyla Gastrotricha (Metchnikoff, 1865) Pearse, 1936, p. 10; Nematomorpha (Vejdovský, 1886) Potts, 1935, p. 527; Entoprocta (Leuckart and Nitsche, 1877) Storer, 1951, p. 380; and Acanthocephala (Rudolphi, 1808) Lankester, 1900, p. 5, seem to be subject to no deliberation. The phylum Rotifera (Cuvier, 1817) Potts, 1932, p. 204, would have precedence over Rotatoria (Ehrenberg, 1831) Pennak, 1953, p. 10, by the published opinions of many workers. Since Minot (1876) first excluded nemertans from the flat worm phylum and used the spelling Platyhelminthes—presently emended to Platyhelmintha, the writer would tend to cite this name Phylum Platyhelmintha [(Vogt, 1851) Minot, 1876] Pearse, 1936, p. 8; but it could also justifiably be rendered Platyelmia (Vogt, 1851) Lankester, 1900, p. 5, sensu restricto Minot, 1876, p. 24, or Platyelma [([Vogt, 1851] Minot, 1876) Lankester, 1900] ortho mut. nov.

(c) **Classes and Orders.**—There is a choice between Cestoidea (Rud., 1808) Poche, 1911, p. 89; Cestodea [(Rud., 1808)] Pearse, 1936, p. 10, and Taeniea [Huxley, 1864] ortho mut. nov., for the tapeworms.

For a good many years, the writer has been aware that the Subclass and Class names Phasmidia, Phasmidea proposed by Chitwood and Chitwood (1933) for a group of nemas is a homonym of the insect Order or Suborder variously rendered Phasmida, Phasmatodea, Phasmoidea, Phasmodea ; based on the genus *Phasma* Lichtenstein, 1796 (*Cat. Rerum Nat.* 3 : 49). The writer must confess that he has by no means exhausted the entomologic literature on the subject. In the little tracing done, however, he has concluded that without uniform endings by the rules in the past, even for families, the entomologists have had as much trouble as helminthologists are now having in determining the ranks given names by various authors. Brues and Melander (1932) recognised an Order Phasmatodea (pp. 17, 61), listing as synonyms : Phásmida, Phasmòdea, Phasmòidea, and Gressòria. Krauss and Wolff (1919) placed the insect Order Phasmida in the " Ordnungsgruppe " Orthopteroidea (p. 171), first mentioning the Phasmida as an order on p. 69, and later discussing the group (pp. 157, 159). The Order Phasmida has been attributed to Leach (1815)—but according to Krauss (1902, p. 534), this was only what Leach called the group (1817–1818), not an Order, and the same is supposed to have been true in the case of Phasmodea Burmeister, 1838, and Karsch, 1893. The " Gruppe " Phasmodea (p. 540) was placed by Krauss (1902) in the middle of the series of Familie Phasmidae and Unterfamilie Phasminae. Verhoeff (1902, p. 30) named the Insectenordnung Phasmodea, placing it in the Saltatoria. Handlirsch (1903) placed the Ordnung Phasmoidea (p. 727) in the Unterkl. Orthopteroidea. Poche (1903, p. 239) emended the spellings to Fam. Phasmatidae, Unterfam. Phasmatinae and " Gruppe " Phasmatodea. From the writer's standpoint further documentation is unnecessary, inasmuch as the use of Phasmodea, Phasmoidea, and Phasmida as orders definitely antedates our use of Phasmidia (1933) as a subclass, by 14 to 31 years.

The writer (1951) verified Cobb's (1928) observation of a phasmid-like structure on *Syringolaimus smarigdus* (p. 647, fig. 9K) and illustrated similar areas on the tails of *Tricoma spinosa* and *T. spinusoides* (p. 644, figs. 8H, 8D–E, resp.). He proposed for these areas the term phasma. Other workers have illustrated structures which they thought were phasmids in various " aphasmidian " nemas, and both the writer and others have been wholly unable to demonstrate even the rudiments of phasmids in a large part of the Order Tylenchida.

No action of the Commission appears necessary on this case of homonymy, inasmuch as the name character itself, *i.e.*, presence or absence of organs termed *phasmids* in the Nemata seems to have been an error, and, in addition, both the names Secernentes and Adenophori von Linstow, 1905, have priority. The writer is only too glad to withdraw the names Phasmidia and Aphasmidia in favour of Secernentea and Adenophorea. Von Linstow's names—emphasising the excretory system—definitely tie the Secernentea, through the tubular character of the system, to the other protonephridial forms. The character thus appears quite fundamental. Whether or not the promotion of Secernentes and Adenophori von Linstow to class rank was effected by M. B. and B. G. Chitwood (1940, pp. 127, 132) or by B. G. Chitwood (1940, p. 202), is a matter of opinion.

Although Dr. Dougherty has called the writer's attention to the fact that Enopla Schultze, 1852 (Nemerta or Rhynchocoela) antedates Enoplata Filipjev, 1929 (Nemata, Nematoidea or Nematoda), the writer takes the attitude that since Enopla Schultze, 1852, is not based on an included genus, but that the genus *Enoplus* Dujardin, 1844 (p. 230) antedates it, the stem Enopl- must be preserved for the nemic group. Benham (1901) stated that the orders Anopla and Enopla Schultze were unsound, and they have been dropped by many specialists of the group—despite their promotion to class rank by Coe (1943, p. 222). Some of the order names in the phylum Nemerta or Rhynchocoela will have to be decided upon, since there have been differences of opinion. The writer has preferred to leave this matter in abeyance for the time being, as also the classes and orders of Rotifera, so that the histories of the various names may be studied by specialists of these groups.

Suggestions.—In general, it would appear wise for the Commission to rule against names of higher taxa denoting likeness to any group of animals not included in the same taxa. The writer can see only difficulties in their acceptance, *e.g.*, *Phasma* Lichtenstein, 1796, *loc. cit.* (insect)—*Phasmidia* (nema). Also—*Bdella* Latreille, 1795, *Mag. encyclop.* 3(13) : 18 ; 1796, *Précis Caract. Ins.* : 180 (arachnid) ; *Bdellia* Westwood, 1840 *in* Blyth's Cuvier, *Anim. Kingd.* : 399 (leech) (pro *-la* Savigny, 1822) not *Bdellia* Enderlein, 1928, *Z. angew. Ent.* **14** : 359 (dipteran fly) ; *Bdella* (Savigny, 1822, *Descr. Egypte* 1(3) (Ann.) : 112 (leech)—Bdelloidea auct. (rotifer higher taxon).

The writer has searched in vain for any single formula that would justify all of the presently used higher taxa. The closest he could come would be to suggest as a formula that the name used by the first worker to rank the group as presently ranked (excluding all necessary forms and including the then known necessary forms) be accepted, providing the name does not indicate any similarity to any group of animals excluded from the group. For placement on an *Official List* a waiting period of fifty years after original publication might well be required.

Regardless of what decisions are made as to higher taxa by the International Congress, the writer heartily endorses the attitude that scientists who disagree with the International Commission on the validity of particular names for scientific reasons should not be proscribed from using the names they believe to be correct in scientific journals. A contrary view would amount to censorship of scientific writings and might well discourage many good systematists. In democracies it is quite common for the majority to be in error. Progress in science, as in other community efforts, depends to a large degree on the dissident minority groups.

Uniform endings for higher taxa

The writer has noted in the Copenhagen Decisions (Decision 67) the recommendation of the Colloquium that the matter of uniform endings for names in the Order/Class Group and the Phylum-Group be brought to the attention of the Specialist Committee ; but the Colloquium was of the opinion that there should be no prescribed terminations for such names.

The very fact that instructions to investigate such questions were issued is evidence of the need. The writer feels there should be no reason to drop the matter at this time despite opposed views. The writer has no idea who first started the practise of uniform endings for higher taxa. But, when the matter was first called to our attention about 1932–1933, those of us in the field of helminthology in the U.S.A. immediately agreed to it—despite the fact that it meant changing the terminations of many commonly used group names in this country. At that time Baylis and Daubney (1926) had recently published a book using the -oidea ending for orders. Yorke and Maplestone in their book published in the same country, England, and in the same year (1926), had used the -oidea ending for superfamilies. The latter endings previously had been used for superfamilies by Railliet and Henry, in France, who also used the -ata ending for suborders. In addition to these " systems ", there was Rauther's (1930) use of the " -oidea " ending for orders and the " -iformes " ending for superfamilies. The present writer does not even know who originated the system of uniform endings that we all eventually adopted in 1936. But since A. S. Pearse (1936) was the man whose name appeared on the A.A.A.S. report, he will call it the Pearse system. Tracing back, one notes that F. Poche (1911) proposed another system of uniform endings ; that at least H. B. Stenzel (1950), C. Hubbs (1953), and Berg (quoted by Hubbs, 1953) proposed such systems. All of these systems have their good points, the greatest of which is that the reader would not need to know the taxonomic level intended by an author to be able to interpret his writings.

Nomenclature in the field of helminthology has improved a bit since 1936 but uniformity in endings to indicate rank is still far from international. In the field of nematology today there are apparently several systems extant. Assuming we did agree to accept the system used by some other group of workers, however, without its incorporation in the International Rules we would have no assurance that they might not change the system. The writer believes he represents in this the majority of helminthologists in the U.S.A. when he says that he would accept any set of uniform endings incorporated in the International Rules. He feels this is more important than *Official Lists* of higher taxa, and should be a corollary of such lists. At the present time some workers on continental Europe use the termination " -oidea " for orders, and do not bother with suborders or superfamilies. Others use the -oidea ending for superfamilies and the termination " -ata " for suborders, while still others have adopted the " Pearse system " in which " -oidea " is used for superfamilies and " -ina " for suborders. In our field the chief difficulty is encountered with the -oidea ending, since one never knows whether it is meant as a superfamily or order. In fact, it is so bad that unless an author states the rank intended, one can only guess from the context. One cannot " tell a player without a program ". The various systems of terminations that the writer has encountered in a far from exhaustive search of the literature are as follows :

Various systems of terminations for higher taxa

RANK	AUTHOR				
	Poche	" Pearse "	Berg	Stenzel	Hubbs
Kingdom		-ia			
Supersubkingdom	-odea				
Subkingdom	-odeae	-a			
Subsubkingdom	-odei	-a			
Supersuperphylum	-acea				
Superphylum	-aceae				
Subsuperphylum	-acei				
Phylum	-aria	-a			
Supersubphylum	-ariae				
Subphylum	-arii				
Supersuperclass	-omorpha				
Subsuperclass	-omorphae				
Superclass	-omorphi				
Class	-oidea	-ea			
Subclass		-ia			
Superorder				-ica	-oilei
Order		-ida	-(i)formes	-ida	-oidei
Suborder		-ina	-oidei	-ina	-oinei
Superfamily		-oidea	-oidea	-icae	-ilae
Family (Official)	-idae	-idae	-idae	-idae	-idae
Subfamily (Official)	-inae	-inae	-inae	-inae	-inae
Supertribe			-idi	-ici	-ali
Tribe (Subsubfamily)		-acea	-ini	-idi	-adi
Subtribe			-ina	-ini	-ani

At the time of the adoption of the " Pearse system " by the A.A.A.S. Committee, some protests were raised by entomologists and ichthyologists who did not want to change the terminations of their ordinal names. In the field of helminthology, the sole formal protest was from Dr. G. Steiner (Pearse, 1936, p. 3), who stated that changing from the subordinal -ata ending to the -ina ending would be " objectionable because identical names already have good standing as genera in the same group (Rhabditina Cobb, 1922 ; Chromadorina Filipjev, 1926) ". The present writer never bothered to answer this criticism since he could not at that time (and still has not) locate any article in which Cobb named a genus *Rhabditina*, and at that time the genus *Chromadorina* Filipjev, 1926, had been synonymised. At any rate, it is the custom to italicise generic names even when appearing without a specific name. Since that time the genus *Chromadorina* Filipjev, 1926, has been revived with additional species having been described. Scientists of the U.S.S.R. persist in using the -ata termination for suborders but, apparently, use the -ida termination for orders. The writer would like very much to see the International Commission settle these differences by designating " Official Uniform Endings for Higher Taxa ", regardless of which group wins or even if it is a compromise. In his opinion, it would do more for stabilising nomenclature than the Official Lists of Phyla, Classes, and Orders.

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DOCUMENT 25/12

Notes on the Naming of Higher Taxa, with Special Reference to the Phylum (or Class) Nematoda

(Commission Reference : Z.N.(S.) 1242)

By **ELLSWORTH C. DOUGHERTY**

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(Enclosure to a letter dated 8th March 1958)

For a previous communication from Dr. Dougherty, see Document 25/4 (: 523–539 of the present volume)

Mr. Francis Hemming has advised me that he regards excerpts from letters sent by me to Dr. Benjamin G. Chitwood in November 1957 as suitable for publication in the volume (Volume 15) of *The Bulletin of Zoological Nomenclature*, set aside for the agenda of the London Colloquium. I had sent carbon copies of these excerpts to Mr. Hemming by way of illustrating certain of the general problems connected with determining the names of " higher " zoological taxa (i.e., of the Order/Class- and Phylum-Groups) and also by way of acquainting him with the specific problems posed by the Phylum (or Class) known generally as the Nematoda, although also called the Nemata by a few zoologists, of whom Dr. Chitwood is the most distinguished and articulate.

2. It was my suggestion that this material, suitably edited, might be usefully published in the *Bulletin*. Dr. Chitwood, to whom the proposal was simultaneously made known, wrote to me strong disapproval of this idea, for he felt—and with reason, as I then realized—that his view-point

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* Contribution no. 17

would not get fair hearing if my position alone were published. However, this objection is met by his being given, at this same time (Chitwood, 1958 : 860 herein), the oportunity to present that position.

3. By way of general explanation of the following excerpts I should first of all point out that the letters from which they were derived were written at a time when I was collaborating with Dr. Chitwood in a paper designed to reclassify the nematodes (what he prefers to call *nemas*). Subsequently he terminated the collaboration, and no joint paper of this sort is now contemplated. Therefore, reference to such publication in the following excerpts should be ignored. We nevertheless remain in a fully co-operative relationship, and our differences with respect to nematode classification reflect disageement at a scientific, not a personal level.

4. Citations to names and to other scientific matters made in the following excerpts are documented in the list of " References " at the end of the last excerpt. Footnotes clarifying certain points have been added and are numbered consecutively.

5. In summary, I wish to state that I personally favor the following names for the three highest taxa of Nematodes because I feel that they best serve the goal of stability and universality of nomenclatural usage (authors are cited according to conventions* used in Appendices III and V of the letter of 16th November 1957, to Dr. Chitwood) :

Phylum Nematoda [([Rudolphi, 1808] Diesing, 1861) Lankester, 1877] Potts, 1932.

Partial synonymy.—§Nematoidea Rudolphi, 1808 (Ordo—pp. 197, 198) ; §Nematoda Diesing, 1861 (Ordo—p. 598) ; §Nematoidea Lankester, 1877 (Phylum—p. 449) ; Nemates Cobb, 1919 (Phylum—p. 214) ; Nematoda Potts, 1932 (Phylum × pp. ix, [214]) ; Nemata Pearse, 1936 (Phylum—p. 10).

Class Secernentea ([von Linstow, 1905)] Chitwood, 1958.

Partial synonymy.—§Secernentes von Linstow, 1905 (Ordnung—p. 272); Phasmidia B.G. & M. B. Chitwood, 1933 (Subclass—p. 130 ; *non* [*inter alia*] Phasmida Krausse & Wolff, 1919 [Ordnung—p. 157]) ; Phasmidea Pearse, 1936 (Class—p. 10) ; Secernentes M.B. & B. G. Chitwood, 1940 ([Subclass or Class]—p. 127) ; Secernentea B. G. Chitwood, 1958 (Class—p.).

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* Dr. Chitwood originated the idea of using square brackets to indicate changes in spelling from the original ; I have elaborated it somewhat and added the symbols : §, ♯, ‡, and †. (E.C.D.)

Class Aphasmidia [(B. G. & M. B. Chitwood, 1933)] Pearse, 1936.

Partial synonymy.—§Adenophori von Linstow, 1905 (Ordnung—p. 273); Aphasmidia B.G. & M. B. Chitwood, 1933 (Subclass—p. 130); Aphasmidea Pearse, 1936 (Class—p. 10); Adenophori M. B. & B. G. Chitwood, 1940 ([Subclass or Class]—p. 132); Adenophorea B. G. Chitwood, 1958 (Class—p.).

Complete citations for all the foregoing names are to be found in the list of " References ". These names occur without (in most cases) complete documentation in the following excerpts; however, citation in the foregoing lists supplies that documentation. It is to be noted that the case of Phasmidia or Phasmidea, the commonly used name of a subclass or class of Nematodes, presents the kind of homonymy (with the order Phasmida Krausse & Wolff, 1919) that, according to ¶68(2) of the *Copenhagen Decisions* . . . (1953 : 42), should be brought to the attention of the International Commission. Likewise several homonymous series exist in the Nematoda, of which an example cited further on (in Appendix III of the letter of 16th November 1957) comprises Spiruria Pearse, 1942 (Class—p. 146)—Spirurida [Filip'ev, 1929] Chitwood, 1933 (Order—p. 131; syn. Spirurata Filip'ev, 1929: Order—p. 282)—Spirurina [Railliet & Henry, 1915] Pearse, 1936 (Suborder—p. 10; syn. Spirurata Railliet & Henry, 1915: Sous-ordre—p. 274). (See also footnote no. 11.) These cases of homonymy are hereby drawn to the attention of the International Commission.

Excerpt from a letter dated 4th November 1957 from

ELLSWORTH C. DOUGHERTY to BENJAMIN G. CHITWOOD

then: *Chief Nematologist, State Plant Board of Florida, Gainesville*;
now: *Research Scientist, Laboratory of Comparative Physiology and Morphology of The Kaiser Foundation, University of California, Berkeley*).

" Nema " *vs.* " Nematode "

My feeling now about " nema " as against " nematode " is that the particular virtue of the former lies in the fact that it is a simple and neutral word for popular use in English—neutral because, unlike " nematode ", it does not have the disadvantage of suggesting " toad ". However, I should like to preserve " nematode " for scientific usage because it is a member of an international group of cognate words (Nematode; nématode; (der) Nematode; nematodo; нематода; etc.). Out of deference to your views I have no hesitation at using " nema " as a scientific word in joint publication with you. And, who knows?—perhaps the latter will take over in time, first in English, then in other languages. But in my separate publications I shall continue to use " nematode " in most cases, although sometimes I may use both.

I am not much impressed with the arguments of saving secretarial time and printing expense. English is replete with redundant letters. I should be interested in a wide-scale simplification of spelling, but, short of that, efforts to simplify isolated words—as with " nematode " (with but 4 extra letters as compared with " nema ")—seem rather quixotic. However, the argument for shortness is a valid one ; the problem thus resolves primarily into a question as to whether the difficulties in changing traditional usage cancel out the advantage of a shorter word. I rather suspect that the answer to this last is " yes ". But I feel strongly that you are entitled to present your case. And I am glad to observe that *Systematic Zoology* has a liberal editorial policy.*

I should warn you, before you lean too much on the point of inappropriateness of " Nematoda " on the basis of the classical meaning of νηματώδης, that the *modern* Greek word for nema is (τὸ) νηματῶδες (pl. νηματώδη). The Greeks of today have abandoned the classical meaning of the word and use for *fibrous* or *filamentous* the word ἰνώδης (m., f.), ἰνῶδες (n.), which also occurred in Classic Greek. My informant is a physician who graduated from the University of Athens† and who studied νηματώδη (!) in medical school in Greece.

It would be interesting to know when the word νηματῶδες (for *nema*) got back into (modern) Greek from the scientific language of western Europe. In any case, it apparently found no effective resistance to itself despite its disagreement with a classic word.

The names Nemata, etc.

The following line of reasoning is what makes me somewhat sympathetic with your espousal of the phylar name NEMATA. I regard, as I believe you do, the strongest point in its favor to be that it was the first name given to the nemas as a phylum unencumbered with the horse-hair worms, i.e., the first completely rational phylum as we see it nowadays. Against this, however, is the fact that Rudolphi named an Order NEMATOIDEA, which was ultimately promoted to the rank of Phylum by Lankester in 1877. A case can be made for preferring NEMATOIDA (ortho. mut.) to NEMATA—as you have yourself implied.

Now where does NEMATODA fit into this ? I'll postpone answering this question till further on in this letter, for I think the time has come for us to inspect all three names from a linguistic point of view :

1. NEMATOIDEA and the emendation NEMATOIDA (from νῆμα and εἶδος [*form*]—as explicitly stated by Rudolphi in 1808) ;
2. NEMATODA (from νηματώδης—at least by implication) ;

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* Chitwood (*in press*).

† Dr. Peter Stathakos, Department of Internal Medicine, Kaiser Foundation Hospital, Oakland, California ; also compare Kykkotis (1947).

3. NEMATA (from νῆμα ; pl. νήματα).

At first blush these words all seem to have different Greek origins. But it is a bit trickier than it seems. I have not yet seen the book by Burmeister in which NEMATODES was first used as a group name—in that case for a family (the book is on order through Interlibrary Loan*) ; but I should be surprised if I find that he indulged in any esoteric etymological analysis. In fact, I do not know if anyone has referred to νηματώδης as the basis for Nematoda. For example, Neveu-Lemaire (1936, p. 653) gave the following : "CLASS : **NEMATODA** Rudolphi 1808" and beneath this "(νη̂μα, fil ; εἶδος, forme)". (The Greek circumflex can be written either ˆ or ˜—hence νῆμα or νη̂μα—the ˜ was a late innovation—of Alexandrine times. I believe, hence past the classical period of Attic Greek. I have consistently written νῆμα rather than νη̂μα purely out of a sense of preference for the historically classical form.) Now, Neveu-Lemaire must be counted as in a sense corect, for the Greek adjectival suffic -ωδης is derivable from εἶδος. In the Attic dialect of Greek, compound words of which the final part came from this word underwent a contraction of the -ο- of the preceding stem with the dipthong "ει" of εἶδος to give "ω" (long "ο"). The uncontracted form, -οειδης, was used in the Ionic dialect (in which the medical writings of Hippocrates were done, for example). Here are some examples from the Liddell-Scott unabridged Greek lexicon† :

ἀραχνιώδης, [ἀραχνιῶδ]ες, *like a cobweb*, Hipp . . .

ἀραχνο-ειδής,ές, *like a cobweb*, Hipp . . .

ἀραχνώδης, [ἀραχνῶδ]ές = ἀραχνοειδής, Arist . . .

From this you can see that Hippocrates, who wrote in the Ionic dialect, used the uncontracted form (at times), whereas Aristotle, who wrote in the Attic (classic) dialect, used a contracted form.

I further find the following contracted form in my small Greek dictionary‡ :

" γαστρ-ώδμς, ες [gastr-ōdēs, es] (γαστήρ, εἶδος) *pot-bellied* ".

Despite a fair amount of searching, I can find no example of an adjective ending in -οειδης in that dictionary, but probably because it (the dictionary) is largely confined to the Attic dialect.

The proper way of transcribing into Latin (i.e., that used by the Roman scholars of their classic period—some hundred of years later than the "classic" Greek period) required, as I understand it, *-ōdēs* for -ωδης and *-oidēs* for -οειδης

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[*] Burmeister (1837, seen as of 19th February, 1958): origin of word not given therein.

[†] Liddell & Scott ([1897]).

[‡] (The) Classic Series (1956).

(the diphthong ει of Greek generally being reduced to *i* in Latin). It therefore follows that *nematoidea* and *nematoda* are merely orthographic variants, both derived from νῆμα (gen. νήματος) and εἶδος.

The problem does not quite rest there, however. At least as far as the written language was concerned, it appears to me that Latin did not borrow very many adjectives of Greek origin ending in -ης (m., f.), -ες (n.), for, by dictionary search at least, I can find very few cases of their having been taken into Latin at all—let alone in the form that classical rules of transcription would have required. The reason for this was apparently that adjectives in -ης, -ες, were rather alien to Latin. Actually the stem of such an adjective, νηματώδης being taken for example, ended in an -ε-, as can be seen by inspecting the alternative genitive form νηματώδε-ος. Such an adjective must have posed real problems to the Romans. They would have wanted to keep it in their third declension, just as it was in Greek—but it was it then to be (in the nominative singular) nēmatōdēs (corresponding to the contracted Greek nominative singular), or nēmatōdeis (preserving the full Greek stem, but then resulting in bizarre—for Latin—plural forms), or nēmatōdis (in which the stem " e " (ε) of the Greek was sacrificed) ?

In all my dictionary searching* I have found but one case each of the first and third alternatives, and *none* of the second. I cannot now recall the example of the first ; but for the third, I found :

> **dapsĭlis,** -e [instead of dapsĭlēs or dapsĭleis] <δαψιλής, -ές—*sumptuous* (a typical Latin 3rd declension adjective with nom. sing. ending in *-is* [m., f.] and *-e* [n.]).

One way out for the Romans was to transfer such words to their 1st and 2nd declensions ; in this way they were able to preserve the -e- of the stem. An example that I have found was :

> **eugĕnēus** or **ius,** a, **um** [instead of eugĕnēs] <εὐγενής, -ές—well born.

I found another case where the -ης,-ες was replaced with *-atus*, *-ata*, *-atum*, but cannot locate it now.

Native Latin adjectives ending in *-ēs*, *-sĕ*, or *-es* were few and far between and were 3rd declensional. They included such words as bĭpēs (gen. bĭpĕdis)—*biped* ; hĕbēs (gen. hĕbĕtis)—*blunt, dull* ; quădrŭpes (gen. quădrŭpĕdis)—*four-footed* ; etc.

All in all, the -ης, -ες adjectives must have seemed to the Romans to have built-in deterrents to word borrowing.

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* In Lewis & Short (1907).

The foregoing analysis is the result of further study since I recast your footnote 1 in " The English word ' nema ' revised ",* plus discussion with a staff member in the Department of Classics.† I would now suggest modifying the footnote slightly (as could be done easily in proof, I should think) to read (3rd line) : " . . . one probable . . . " instead of " . . . the most probable " ; also the pl. (m., f.) form would better be written " *nēmatōdes* " than " *nēmatōdēs* " (i.e., the macron over the final " e " should be dropped).

To give you an idea of how complex this problem is, I have prepared the following table :

	Singular		*Plural*	
	Greek	Latin	Greek	Latin
Nominative				
Masculine and Feminine	νηματώδης	*nēmatōdēs*	νηματώδεις	*nēmatōdes* [*nēmatōdīs*]‡
Neuter	νηματῶδες	[*nēmatōdes* for neuter]‡	νηατώδη or νηματώδεα	*nēmatōda* (or *nēmatōdia*) or *nēmatōdea*
Genitive				
Masculine and Feminine	νηματώδους or νηματώδοες	*nēmatōdis* [*nēmatōdūs*, or *nēmatōdeos*]‡	νηματώδων or νηματωδέων	*nēmatōdum* (or *nēmatōdium*) [*nēmatōdōn*, or *nēmatōdeōn*].
Neuter	νηματώδους	*nēmatōdis* [*nematodūs*]‡	νηματώδων	*nēmatōdum* (or *nēmatōdium*) [*nēmatōdōn*]‡

I hope I am not boring you with all this linguistics. It is excusable, I think, not only because writing it serves to make me organize my thinking, but because it will, I believe, show you the intricacies of this kind of problem.

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* *Vide* footnote † on page 899.

† Dr. Elroy L. Bundy, Department of Classics, University of California, Berkeley (to whom warm thanks are due.—E.C.D.).

‡ These are more exact transcriptions, according to the standard rules of Latinization as I understand them, but result in forms never found in regular 3rd declension Latin adjectives, so far as I am aware.

Moreover, the reason that the foregoing has pertinence is that, in naming taxa of organisms, one is supposed to use " neo-Latin ". But the plain fact is that " neo-Latin " is largely a hypothetical entity as far as I can see. Zoologists certainly need further guides than what we have. One thing is clear, however : zoologists have generally acted as if they had licence to take Greek stems and add Latin endings to suit their fancy. This probably is no more than just, since the actual Roman practices were diverse and capricious. (I guess this last fact is as one should expect to find it, for borrowing from Greek into Latin went on for several centuries, and there obviously was ample opportunity for styles to change. Moreover, what is preserved is only what was written. Obviously, one can have no exact idea of how the Greek that was borrowed into Latin was actually spoken. I venture to say that there were all conceivable permutations of possible forms for borrowed words—from those that would have had to be written as faithful transcriptions of the exact Greek to very free and radical latinizations.)

To get back now to " Nematoda "—one can interpret it in any one of several ways. Since most names of zoological taxa above the Family-Group of names are best taken as neo-Latin neuter plural adjectives used as substantives (thus agreeing in gender with the Kingdom name Animalia), one can select any of the following :

(1) " Nematoda " as a transcription of the neuter plural Greek adjective νηματώδη with the η rendered as *a* rather than *e* (this was commonly done in classic Latin with terminal η in several situations) ;

(2) " Nematoda " as the neuter plural of a neo-Latin adjective *nēmātōdus*, *-a*, *-um*, derived from νηματώδης ;

(3) " Nematoda " as the transcription of νηματῶδα, the neuter plural of a neo-Greek adjective νηματῶδος, -α, -ον (which would be rendered into Latin as *nēmatōdus*, *-a*, *-um*—this is in a sense a variation of saying what is said under 2) ;

(4) " Nematoda " as an arbitrary word formed by adding the suffix *-a* to the stem *nēmatōd-* (derived from νηματώδης).

You pays no money, but you takes your choices anyway if you want to.

Now to the real meat of the problem. It is the relative position of Nematoidea or Nematoda (which are really orthographic variants, both derived from νῆμα + εἶδος) *vs.* Nemata. At my suggestion you accepted the formula : Nemata [(Rudolphi, 1808) Cobb, 1919] Pearse, 1936. I now think that this is wrong. Nemata cannot properly be attributed to Rudolphi as initial user—but is Cobb's alone. The reason for this is that the stem *nemat-* is derivable from νημα (gen. νήματος) only, whereas Rudolphi's stem *nematoid-* must be reckoned a compound of two words—νῆμα + εἶδος, as also must Burmeister's stem *nematod-*.

Excerpts from a letter dated 16th November 1957 from

ELLSWORTH C. DOUGHERTY to **BENJAMIN G. CHITWOOD**

(**Editorial Note :** Here followed four Appendices (Appendices II to V). These had already been communicated to the Office of the Commission by Dr. Dougherty under cover of a letter dated 20th November 1957 with a suggestion that they should be published in the *Bulletin of Zoological Nomenclature.* In accordance with this suggestion Dr. Dougherty's letter with the four accompanying Appendices were placed on the London Agenda Paper, being allotted the Document Number Document 25/4. That Document has been included in Double-Part 16/17 of the present volume (: 523–539). This Part was published on 21st March 1958 ((intl'd) F.H. 23rd March 1958)

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DOCUMENT 25/13

Comment on the procedure for securing lists of names for Orders and Classes recommended for stabilisation

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Commission Reference : Z.N.(S.) 1242)

(Enclosure to a letter dated 4th April 1958)

Hemming (D.25/1, para. 3), Hopkins (D.25/7) and others have rightly drawn attention to the difficulties inherent in appointing committees of specialists for the purpose of drawing up lists of the names of Orders, Classes and higher ranks recommended for stabilisation. Hopkins suggests that in place of committees, invitations should be extended to individuals, or that individuals should be encouraged to volunteer. In effect, then, Hopkins suggests that the procedure would be less cumbersome, and become, indeed, practicable, if the Committees proposed at Copenhagen were replaced by individuals, whose recommendations would then be published, and open to comment by all zoologists.

2. Hopkins' suggestions seem to me to be eminently sane. There is one difficulty, however, which I think should be foreseen, and steps taken to circumvent it. Although a general invitation might well evoke an occasional response on a scale equivalent to the comprehensive proposals provided by Melville and Durham (D.25/2), it is inevitable that Hopkins' proposal would specially encourage individuals to provide lists for the conservation of taxa relating to relatively minor parts of the animal kingdom, the province of but few specialist experts. Such proposals are those already provided by Cox (D.25/6) and Knight, Lemche and Yochelson (D.25/9). From the point of view of the general zoologist, as also of the Commission, such proposals suffer in comparison with those more comprehensive in scope in that it is difficult to be certain how the acceptance of a particular Order or Class name may affect the stabilisation of names of related taxa in the same phylum. This difficulty may be illustrated by the further examination of the cases now before us.

3. Cox (D.25/6) summarises the history of eight names, each in competition for that of the class with the genus *Chiton* as type. He mentions also the name Amphineura as that of a phylum containing *Chiton*, but states that, as a phylum, " it was not synonymous with the series of names under consideration, and further reference need not be made to it ". I am myself no specialist in this group of Mollusca, but I am uneasy at this dismissal of the name Amphineura, for the name has, in fact, been rather often used, as that of a Class containing *Chiton*, in general works on palaeontology and zoology. It is so used in the following : *Gründzüge der Paläontologie* (Zittel, 1903) ; *Textbook of Paleontology* (Zittel & Eastman, 1913) ; *Invertebrate Paleontology* (Twenhofel & Shrock, 1935) ; *Index Fossils of North America* (Shimer & Shrock, 1944) ; *Palaeontology Invertebrate* (Woods, 8th edit., 1947) ; *Traité de Paléontologie* (Piveteau, 1952) ; *Invertebrate Fossils* (Moore, Lalicker & Fischer, 1952) ; *Manuel de Paléontologie Animale* (Moret, 1953) : *Principles of Invertebrate Paleontology* (Shrock & Twenhofel, 1953). The list could be considerably extended. Now, so far as I know, there is nothing in the Copenhagen Decisions that prevents a name proposed as that of a phylum being transferred to that of a Class. Cox proposes that the name Polyplacophora be stabilised as that of the Class having *Chiton* as type. In several of the works quoted above (including some of those quoted by Cox in support of his application), the name Polyplacophora is used as that of an Order within the Class Amphineura. It seems clear to me that it would be unwise to come to any conclusion as to the future of the name Polyplacophora without considering the effect that such a conclusion would have on the name Amphineura.

4. Knight, Lemche, and Yochelson (D.25/9) propose that the Order or Class name Monoplacophora be stabilised (presumably typified by the genus *Tryblidium*). Again, I can claim no specialist qualifications to enable me to offer any authoritative comment, but I note that the genus *Tryblidium* has, in general works, previously been placed in the Class Amphigastropoda or Protogastropoda, and has been referred to the Order Cynostraca. It seems to me important that the future of these other names should be considered at the same time as the name Monoplacophora.

5. It is clear from the foregoing paragraphs that a decision affecting a single name is likely to have repercussions on the names of related groups, and this is all the more the case as no taxa of high rank have yet been officially stabilised by the choice of type genera, and no Law of Priority applies. Although, then, I agree with Hopkins that individual specialists should be encouraged to submit names of Orders and Classes for stabilisation, yet I feel that the receipt of such applications needs to be followed by a procedure designed to widen the scope of the enquiry to cover related groups in the same phylum. I find it difficult myself to formulate a procedure that is not too cumbersome to be practicable, but I hope that the Colloquium will discuss the problem when considering this case.

DOCUMENT 25/14

Comment on the petition relating to the date and authorship of the Order/Class name " Monoplacophora "

(Commission Reference : Z.N.(S.) 1242)

By **L. R. COX**

(*British Museum* (*Natural History*), *London*)

(Statement received 21st April 1958)

There is a further fact that should be taken into consideration when the Commission deals with the question, submitted by J. B. Knight, H. Lemche, and E. L. Yochelson, of the date and authorship to assign to the Order/Class name Monoplacophora.[1]

It should not be overlooked that there was a prior usage of the name Monoplacophora in the Phylum Mollusca, namely, by J. D. F. Gilchrist (1895, *Proc. R. Soc. Edinb.* **20** : 358), who proposed to designate those Mollusca " protected by two shells only " as Diplcacophora and those having " a single shell as a means of protection " as Monoplacophora.

In my opinion it cannot be reasonably maintained that Gilchrist's names were not validly introduced for use in taxonomy because his outlook was not a taxonomic one and no rank was assigned to the groups designated. It is evident from Gilchrist's remarks that he considered Monoplacophora and Diplacophora to rank equally with Aplacophora and Polyplacophora, both always accepted as names of the Order/Class category, and the use of such a phrase as " factors . . . which determine the classification of the sub-groups " shows that his approach to the subject was at least in part taxonomic. It thus appears that Gilchrist's names have been available for acceptance as names of the Order/Class category by any workers accepting his basis of classification.

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[1] See Document 25/9 (: 555–556).

We are therefore faced with a problem of homonymy in names of the Order/Class category, for Monoplacophora, in the sense of Knight, Lemche, and Yochelson, was a homonym of Monoplacophora Gilchrist, and, unless validated by use of the Plenary Powers, was " still-born " no matter whether it is attributed to Wenz, Odhner, or Knight.

I suggest therefore, that, in order to remove this difficulty, the Commission should also be asked (4) to place the names Monoplacophora Gilchrist and Diplacophora Gilchrist on the *Official Index of Rejected Order/Class Names in Zoology.*

DOCUMENT 27/6

(*continued from page* 642)

A Critique of Professor Chester Bradley's " Principle of Conservation "

(Commission Reference : Z.N.(S.) 861)

By **PHILIP HERSHKOVITZ**

(*Chicago Natural History Museum, Chicago, Illinois, U.S.A.*)

(Enclosure to a letter dated 28th March 1958)

[The following critique is contributed as a supplement to my own proposition for a " Law of Prescription ".[1] It will be noted that a Principle of Conservation and a Law of Prescription are the two faces of the same coin. The first would conserve a selected junior synonym by rejecting the senior synonym, the other would reject the senior synonym in favor of a selected junior synonym. The *Recommendation* offered below applies to all proposals of the same nature.]

The " Principle of Conservation " proposed by Professor Bradley in Article 5, Section 3 (: 43) of his draft of the *Règles* states, " if a name for a taxon that is not an invalid homonym is in general current use and has been available for fifty years or more, it shall not be replaced on nomenclatural grounds by a senior synonym, unless the latter has been widely used during some part of the fifty years preceding its proposed substitution ".

Professor Bradley concedes that " interpretation of ' general current use ' and ' widely used ' must necessarily be subjective ". He also recognizes " that complete search of the literature for the fifty year period would usually be impracticable ". To these qualifications of his Principle of Conservation may be added the following :

1. Many names are not " in general current use " because the taxons to which they apply have not been objects of study since first described or, having been objects of additional study, either have not been made subjects of supplementary published reports or have been redescribed under different names.

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[1] For the document here referred to see Document 27/2 (: 630–632).

2. " Usage " as applied to a name cannot be restricted to use in scientific literature published during the twentieth century. Names appear also in speech, thought and are written in manuscripts and on labels of specimens or of animals held for study or exhibition. The direct association of a name with the animal is usage in a sense that is more meaningful than the mere citation of the name in literature.

3. Many check lists and text books published fifty or more years ago are " widely used " and often the only reliable comprehensive works of their kind (e.g., Trouessart's *Catalogus Mammalium,* 1897; Flower and Lydekker's *Mammals, Living and Extinct,* 1891). Scientific names in these classics are familiar even if some of them may not be " current " in the narrow sense employed by some nomenclaturists.

4. The number of names " in general current use " which are in imminent or potential danger of replacement on strictly nomenclatural grounds by senior synonyms not " widely used " for the last fifty years, are too few to justify adoption of any Principle of Conservation with all its attendant complications.

5. As the obverse of item 4, the vast majority (in recent years, nearly all), of changes in nomenclature in most, if not all, groups of animals have been based on homonymy or on taxonomic grounds and such changes are rightly excluded from the operation of the proposed Principle of Conservation.

6. The proposed Principle does not require documentation of the existence of a broad general demand for the conservation of a junior synonym the use of which has extended beyond the realm of narrow specialization. On the contrary, operation of the Principle provides a convenient service for zoologists (who can muster a friendly following when necessary) desiring to conserve favored names for obscure taxons of moment only to one or a few specialists.

7. According to the procedure suggested for use of the Principle of Conservation, a proposal for the rejection of a senior synonym may be made by one person. The proposal may be based, consciously or unconsciously, on prejudice. The pertinent bibliographic data may be deliberately or inadvertently one-sided and/or misleading. The proposer is not required to present personal credentials, his motives may not be openly questioned, his competence as a zoologist, if he is one, is not weighed. In the absence of a protest to a proposal because of ignorance, indifference, or inability on the part of an objecting specialist to meet the two-year deadline, the Commission, according to suggested procedure, must reject the senior synonym and place the junior synonym on the appropriate *Official List* of Valid Names.

8. Scientific research, including bibliographic research, cannot operate freely in a dimension arbitrarily restricted by time. The proposed Principle of Conservation carries the implication that the validity of scientific discoveries diminishes and ultimately vanishes with the passage of time.

9. An ideal Principle of Conservation should function automatically ; it should yield the same solutions for the same problems ; it should permit free and universal application without the need for recourse to or intervention by the International Commission. Such a Principle is precisely the " Law of Priority ".

Discussion : The Principle of Conservation proposed by Professor Bradley, if adopted, would contribute more to confusion and controversy than to the nomenclatural stability it purports to provide. The nomenclatural changes or " upheavals " the Principle would eliminate can be, and always have been, disposed of independently by individual zoologists or by tacit agreement among zoologists, and by the International Commission by use of its Plenary Powers. Professor Bradley's proposed Principle of Conservation neither provides better means for nor avoids the pitfalls encountered in seeking nomenclatural stability.

Recommendation : Any principle, rule or law that specifically provides for annulment or circumvention of the Law of Priority shall not be incorporated into the International Rules of Zoological Nomenclature.

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(*continued from page* 808)

Miscellaneous Comments on the Draft of the " Règles "

(Commission Reference : Z.N.(S.) 1329)

By **HENRY TOWNES**

(*Museum of Zoology, University of Michigan, U.S.A.*)

(Enclosure to a letter received 9th April 1958)

I have read over the mandatory parts of the new Draft of the Rules, but not the " recommendations ", or very few of them. Below are comments on the mandatory parts.

There is much to be recommended in this Draft, and much to be criticized. A number of things that have proven necessary procedures and become standard practice are now clearly formalized in rules. These offer valuable guidance which has not previously been easily available. Some of the old rules have been clarified. The principle of first revisor has been formally applied to many situations. The things that seem good will not be discussed further, as it seems to me now that the need is to delete or modify the undesirable sections, and thus make a document that will be of real service and will merit respect and permanence.

The proposed rules make some unnecessary exceptions to cardinal principles. Some of the exceptions relate primarily to previous controversies or stages of development of the International Rules, or to questionable *Opinions* of the International Commission, or to certain personal opinions. All too often the function of these exceptions seems to be protection of the points stressed by these opinions rather than codifying a useful part of nomenclatural practice. The rules would be more useful if many of these special or partisan exceptions were eliminated.

Much attention is given to declaring invalid the contributions of authors not meeting certain standards, but at the same time, names mentioned only in synonymy are accepted as valid. Could any name be validated under worse circumstances than as a synonym which is considered both unnecessary and unavailable by its author ? Also, the special protection given to new names for secondary homonyms seems out of line with the general philosophy of discouraging the ill-considered multiplication of names.

It is a curious thing that while this Draft puts the scientific worker under more meticulous, detailed, repetitious, and compelling rules than the earlier International Rules, it gives the International Commission practically unlimited power to help him circumvent the rules on occasion. One would gather that circumvention of the Rules will henceforth be the main activity of the Commission, and to make sure that this can be done efficiently and unhindered, the Commission is given wide powers.

The Commission is given " legislative, judicial, plenary and emergency powers ", and the power to nominate or elect its own members. It may set aside any part of the Rules and it may reverse its own actions. It can make decisions that set precedent or it can declare that a decision does not set precedent. Thus it is not bound to follow any consistent policy, or even to agree with itself. Its decisions are declared to be above question, except that it may reverse them.

Exercise of the powers of the Commission is as easy as the powers are broad. Many kinds of cases can be settled without a hearing from the opposing viewpoint, provided no one looks up the facts and protests to the Commission before a set deadline. If there is a protest to a proposal, the Commission may decide the case with finality by a vote of as few as one fourth of its membership, and it is not necessary that each of these voters should know whether he is voting " yes " or " no ". There is a provision that Commissioners who do not wish to evaluate a case for themselves may leave direction with the Secretary to record their vote as agreeing with the majority. Thus, as few as two Commissioners with only second hand information from a possibly biased source could make a decision which is not supposed to be subject to question. In contrast to this, a decision by a specialist, with full first hand knowledge of the nomenclatural, historical, and zoological aspects of a case, is subject to review on its merit (which is, of course, the only scientific way to view a decision).

While the Commission claims the power to make final decisions, experience has shown that its *Opinions* are not final. A number have already been reversed, and appeals from the results of others are on the way. The only permanent decision by the Commission, as by the rankest amateur, is the one which proves in the long run to be wise enough to have general and lasting support.

My own view on this situation is that we should be very careful about what rules are adopted, then presume that they will be observed without exception. Some of the rules in the draft are so often impractical to apply that there is some need for the Commission to provide a means for avoiding them on occasion. It would be better if such " Rules " were changed to " Recommendations ". In this form they would cause less trouble and make it unnecessary to breach the " Rules " to maintain a sound nomenclature.

The International Commission should be given power to decide cases only in accordance with the International Rules, and if all evidence of importance is not considered in an *Opinion*, the case should be subject to review. Thus we would return to the type of *Opinions* issued prior to 1935. There should be confidence that the taxonomic specialist will use his full knowledge and powers to build up a useful, accurate, and consistent nomenclature, as stable as a changing science will allow. The specialist should not be hampered with directions to send information to the International Commission, to have it make the decisions for him. Also, he should not be required to be constantly alert to protect scientific nomenclature by investigating the many proposals to the Commission and writing many articles or letters to meet set deadlines. He has his own work to do, and in practice there may be few persons in the world (or none) at any given time able to inform the Commission on the justice of a given proposal before it, or on the completeness of the information in the proposal. There are certainly times when the specialist needs advice, and the Commission could often help him. There are some cases (very few but some of them important ones) where lack of decisive information or conflict of nomenclatural principles results in situations not easily decided by the rules. For such cases a careful consideration and decision by a group of experienced nomenclaturists is desirable. But unless the Commission itself follows principles and rules, it can only confuse matters when asked for guidance, or if its backing is wanted it will only echo the more influential of the opinions presented to it for approval.

The ever present possibility of circumventing a rule with the aid of the Commission makes this draft of Rules indecisive in a high proportion of cases. Though giving specific directions with the tone of command, there is also often the suggestion that sometimes it will be best to avoid applying the rules. Although it states that the rules can be avoided only under a definite routine and with lack of effective opposition within a certain period, in actual practice there will be many times when the rules will not be followed because it might be possible to circumvent them officially if the official method were attempted. And, if the Commission made a definite ruling on the case one could avoid following this ruling with the excuse that an appeal for a reversal would probably be made to the Commission at some future time.

It would seem better to have the Rules formulated without any reference to making exceptions or to the Commission. The Commission should be a separate advisory or judicial body with the same relation to the Rules that a Civil Court has to the Law or the Constitution. Its powers and functions should not be made part of the Code, but considered separately.

The above discussion applies in general to many parts of the Draft. Particular comments on particular sections are as follows :—

Point (1)

Article 1, Section 1 (: 35) : It is often considered that species, genera, etc. are concepts, though based on reality. Under this view, would Section 1 make any sense ?

Point (2)

Article 3, Section 1 (: 39) : Recommendation. Change " choosing " to " proposing " and make the recommendation stronger.

Point (3)

Article 3, Section 2 (: 39) : Make it clear that the name dates from its original proposal rather than from the time of transfer.

Point (4)

Article 4, Section 5 (: 41) : It would seem better to omit this Section. If applied retroactively it would necessitate re-examination of many well-used names as to compliance of the general work in which they were proposed, and inevitably some well-known and otherwise valid names would have to be discarded. If applied only to the future, this section would tend to make for uniformity in proposal of names, but would result in some unfortunate cases where names proposed in valuable monographs were unavailable because of irregularity in some part of the work. The total harm would probably outweigh the good.

Point (5)

Article 5, Section 1 (: 42) : This section prevents any part of the new Code from becoming retroactive. It may also negate any power given the Commission to deal with names under " suspension of the rules ". Is this what was intended ?

Point (6)

Article 5, Section 3 (: 43) : The principle of " usage " overlaps the other principles expressed in this draft, and it will be essential either to state which principles will always have priority, or if sometimes one and sometimes another, exactly where the division of authority lies. Usage will have to be defined by exact number of references, per cent of uniformity, and accuracy of concept to which a name is applied, or it overlaps and muddles the whole system of rules.

In my opinion the principle of usage has no place in scientific nomenclature except for a statement that significant usage should not be upset unless required by the rules.

Point (7)

Article 5, Section 4 (: 45) : If a " long-overlooked name " could be given a useable definition this would be a helpful rule, otherwise not. It seems almost impossible to use this principle without, in effect, adopting a new date as the starting place for nomenclature, later than 1758. As it is now stated, the Section would lead to confusion in nomenclature. It should be revised or abandoned.

I myself do not see that it could be stated in a way that would make it useable.

Point (8)

Article 5, Section 5 (: 46) : Since it is possible to use a revisor's interpretation of *nomina dubia*, they could be dealt with in this way. This Section, though solving some problems, would be an invitation to discard many names without a sincere effort to use them. *Nomina dubia* gradually get clarified and put into use. Why not permit this process to continue at its natural pace ?

Point (9)

Article 6, Section 1 (c) (: 49) : Note that a name can end in the same letters as a " forbidden suffix " without actually having a suffix.

Point (10)

Article 6, Section 1 (d) (: 49) : This had better be omitted. If really applied it would result in differences of opinion and upset of some well-known names. What is " offensive " varies not only with language, but also with place and time. Some names proposed as purposely offensive are now in reputable use and may as well remain so.

Point (11)

Article 6, Section 1 (e) (: 49) : See discussion of articles 27 and 28.

Point (12)

Article 6, Section 1 (f) (: 49) : I agree with this but elsewhere in the draft a synonymy is admitted as the basis of a family name.

Point (13)

Article 6, Sections 1 (i) and (j) (: 50) : These two are repetitious. Why not omit the date, use " i " only, and define " indication " here instead of in Section 3 ? If a standard for an indication makes a useable name in 1929, why not the same standard in 1931 ?

Point (14)

Article 6, Section 1 (k) (: 51) : This section, in practice does more harm than good and had better be omitted. If it is a requirement, there should be an explanation of what to do with the species included in a new genus without designated type. If the species names are to be considered valid but the generic name not, under what generic name are they to be listed ? If the species names are not valid, it should be stated what is to be done to give them validity. (See Article 6, Section 5 (b), and in opposition to this the last paragraph on p. 101). Although this section has the good intention of encouraging authors to cite genotypes in the original publication of generic names, this objective could be achieved by a " recommendation " which did not cause the inconvenience to users of the published literature that results from its statement as a " requirement ". It would be very troublesome to try to enforce this as a rule, and confusion of the literature seems to be the main result of trying to do so. A subsequent designation of a genotype is much better than rejecting such a name, then proposing a new name all over again for the sole purpose of giving it a genotype in its original publication. Also, such names very easily come into use from their first publication even if some later author states that they are not valid. Not everyone knows or cares that a nomenclatural technicality has not been satisfied when the name was introduced.

Point (15)

Article 6, Section 1 (m) (: 51) : This requirement is not well followed. Could it not better be made a " recommendation " ?

Point (16)

Article 6, Section 1 (n) (: 52) : This seems O.K., but how could an author propose a replacement name without making it clear that the older name is to be rejected in its favour ? I can't think of a possibility. Just what practice is the rule intended to forbid ?

Point (17)

Article 6, Section 3 (5) (: 53) : A name cited in synonymy is not proposed by its publisher as the proper " designation " of an animal (a requirement for validation of a name in the present International Code). It is cited for what information of value it may give, but as a useable name is definitely rejected by its author. Adoption of this Section denies an author opportunity to clarify the status of a manuscript name or *nomen nudum* unless he also takes responsibility for proposing it. This is nonsense and quite unnecessary.

If the Rules are to require recognition of a name in this case, why do they elsewhere make so many provisions for rejecting names which appear in literature under much better conditions than names mentioned in synonymy ?

It has been argued that a name mentioned in synonymy has as its original description the descriptions of taxa with which it was synonymized. This is a lack of understanding of the fact that the real requirement for a description of a new taxon is for characters that may be presumed to be differentiating. Assignment of any manuscript name to a genus or family thereby associates it with the generic or family characters, but not with its own differentiating characters. The case of names mentioned in synonymy is ordinarily the same. Some such names are accepted under Article 6, Section 7 (b)(1). In my opinion such names as were brought into use of the principle of validation in synonymy were introduced replacing properly established names, contrary to sound nomenclatural principles (though with the precedent of two *Opinions*), and in some cases contrary to well established usage. Under these circumstances it seems to be an unwarranted breach of good nomenclature to maintain them with a special rule.

Names mentioned only as definite synonyms should always be treated as unavailable, regardless of whether there is independent descriptive data with them. See Article 6, Section 4 (3).

Point (18)

Article 6, Section 5 (e)(i) (: 55) : Why except Ammonites ? Is their case different from all others in zoology ?

Point (19)

Article 6, Section 5 (f) (: 56) : Parts 2 and 4 are necessary. The rest invite widespread emendations, variant spellings, and differences of opinions thereon, which would be harmful.

Point (20)

Article 6, Section 7 (: 58) : See discussion of Article 6, Section 3 (5).

Point (21)

Article 6, Section 8 (c) (: 61) : Could not this section be omitted entirely, or replaced with a statement that names proposed in indices are as valid as in any other places, provided that they meet the general requirements for validation of a name ? It is an involved rule and seems to get nowhere.

Point (22)

Article 6, Section 9 (5) (: 62) : This is the question of validation in synonymy again. A name should not be considered valid until it is used for the " designation " of a taxon. Citation only for explanatory purposes accompanied by a definite rejection should not constitute a valid proposal of a name.

Point (23)

Article 7, Section 4 (6) (: 67) : It is common practice to date publication from separata, providing that they were widely distributed. This is in line with the general principle of publication.

Point (24)

Article 10 (: 78–87) : This Article is redundant as far as rules go. It could well be omitted here and included in an appendix, as instruction rather than in the Rules themselves, as these are primarily directions on how to deal with names already published. Practically everything in Article 10 is repeated elsewhere.

Point (25)

Article 10, Section 2 (b) (: 85) : This might better be omitted. Animals are so varied that it would not seem possible to make a satisfactory definition of the " work " of an animal. Anyway, why make limitations on the source of characters ? Many decisions would be needed on categories like : shells of molluscs ; shells of foraminifera ; galls of insects ; footprints of dinosaurs ; skin prints of dinosaurs ; nests of termites ; corals ; worm tubes ; etc.

Point (26)

Article 11 (: 88–91) : Article 11, as proposed, is an invitation to revised spellings and consequent differences of opinion and usage. Thus, it is undesirable. Emendations of generic names are particularly to be avoided because they lead to new homonymy. A statement like that below would seem better :

1. The original spelling of a name is to be maintained except as follows :

(a) An adjectival specific, subspecific, or infrasubspecific name is to be made to conform in gender with that of its generic name.

(b) Capitalization of names shall be made to conform with correct usage.

(c) Formation and termination of names of the family-group shall be made to conform with correct usage.

(d) Numerals contained in names may be spelled out in their Latin form.

(e) Diacritic marks may be omitted, though it is recommended that they be kept.

2. If a new name is spelled more than one way in its original publication, the first person to call attention to this fact and to choose one of the original spellings in preference to others is to be considered the first revisor, and his choice is to be followed.

3. Variant spellings (different from the original spelling and not included in the provisions of section 1) which were evidently or may be presumed to be errors, *lapsi*, or misprints have no status in nomenclature. Clearly intended variant spellings are to be considered substitute names, with the same nomenclatural status as other substitute names.

Point (27)

Article 12 (: 92–94) : In spite of some sentiment for rules for this group of names it would seem wiser to keep hands off, at least for the present. These kinds of names have an involved history and usage and would be hard to deal with by means of rules. Usage, priority, and appropriateness, in varying emphases should be allowed to work out these names as they are now doing. The names are relatively few and though there are more names than needed, to a certain extent each name has its own connotations and is not exactly equivalent to some other name. An author often chooses a name according to the animals he wishes to include in his category. Thus he might choose Planipennia (over Neuroptera, Saltatoria over Orthoptera, etc.) to make his meaning clear. It may be best to leave this situation alone, or to be content with some " recommendations ".

Point (28)

Article 13, Section 3 (: 96) : Although priority of supergeneric group names has been frequently advocated, it has many disadvantages and before adoption it would be appropriate to compare its practicality with that of the other main system for selecting family-group names, which is priority of generic name within the group (or in case of more than one generic name of the same age, the choice of the first revisor). In my opinion, the oldest generic name within a group is the best source of the family-group name because :—

1. Bibliographic data for determining the oldest generic name are readily available, while data for priority of supergeneric group name are not complete enough for making stable decisions. Supergeneric group

names have been proposed in such a variety of places and often with such informality that they would be difficult to catalogue with the necessary completeness.

2. In my experience, the types of the family-group names already correspond rather well with the oldest included genus. This is the method of type genus selection given preference in the earlier codes of nomenclature (Strickland and Dall codes), at the time when many of these names were being proposed or stabilized. On the other hand, it is hard to say how well the type genera now correspond with priority of supergeneric group names. The bibliographic data are not complete enough, and advocates of this method of selection differ among themselves in details which make it often impossible to say what the type genus would be even when the data are complete. Even the proposed wording of Article 13, while representing one of these points of view, contains some disguised elements of other views, which results in conflicting ideas. (Compare Section 3 (b) with 4 (b) and note the indecision about vernacular names. See also Article 24, Section 6 (d), which is a rule that would be difficult to apply without disagreements.)

3. The oldest available generic name in a group is a single and definite thing and selection of this as type circumvents many vexing questions or disagreements like changes of family names when the type genus is synonymised, vernacular names of families, whether putting a plural ending on a generic name always constitutes its designation, type genera misidentified when the family name was proposed, and zoological continuity of the type genus.

4. The first action in grouping species together is the creation of a genus for them. Later, this genus may be subdivided, or other genera associated with it so that instead of one genus we have a group of genera which may be called a generic group, or a tribe, subfamily, or family. It would be just as logical to date priority of the family-group name from creation of the first genus contained as from the first pluralization of a generic name and subordination of others under it. With logic and maintenance of usage about equal for either method, it would be best to select the method that would be most convenient to apply, or the one that would give rise to fewer disagreements, which in both cases would be the method of the oldest generic name.

Point (29)

Article 13, Section 4 (a) (: 97) : There has been so much protest already over this proposal that I shall only add mine, without elaboration.

Point (30)

Article 13, Section 4 (b) (: 97) : This is confused thinking. A nomenclatural type is the permanent type of a name but type of a *taxon* only as long as it has that particular name. Note the following situation :

Name			*Type Genus*		
Aidae	1902	Black	(*Aus*)	=	*Cus*
Bidae	1904	Johnson	*Bus*		
Cidae	1906	Thomas	*Cus*	=	(*Aus*)

If the above three family names all apply to the same family, authors using Section 4 (b) would select " Cidae " and date it from 1902, in order to give it priority over " Bidae " 1904. Yet Section 3 (b) states that a name of the family-group should date from the time of its original publication, which would give " Bidae " 1904 priority over " Cidae " 1906. There is a conflict of ideas here, due to failure to differentiate between types of names and types of zoological groups. Section 4 (b) is certainly not in line with the way types and priority of names of genera and species are treated. See Article 24, Section 15 (e)(1) and (2).

Point (31)

Article 15, Section 2 (2a) (: 106) : In case of doubt the term " variety " should continue to be admitted as a substitute for " subspecies ". The term is too firmly fixed in literature as often approximately equivalent to subspecies to have this meaning abandoned immediately. Botanists still use it regularly this way.

Point (32)

Article 15, Section 4 (: 107) : There is no need to involve the Commission here. Either the system will or will not function to advantage, and should be advocated or not on this basis.

Point (33)

Article 15, Section 8 (c) (: 111) : This rule seems confused. Combinations with a generic name have separate status if the generic name itself has separate status. The question depends on whether or not emendations are considered to have separate status.

Point (34)

Article 16 (: 112–114) : I have no experience with names of hybrids and no opinions on them.

Point (35)

Article 18, Section 3 (b) (: 118) : Omit this. See discussion of Article 6, Section 1 (k).

Point (36)

Article 18, Section 4 and 5 (: 118 and 119) : See discussion of Article 13.

Point (37)

Article 19, Section 2 (c) (: 121) : This is unnecessary and will doubtless lead to confusion. Suppose that Mr. Jones is not certain of the identity of the type of say *albus* Smith, 1870, but knows well the usual application of the name *albus*. To be sure he knew what zoological species was genotype, he may designate that *albus*, as interpreted by himself, or some other author, but not necessarily the *albus* of Smith is the genotype. According to this rule he has therefore proposed *albus* as a new name for the zoological species made genotype. Very likely *albus* Smith, 1870, will belong to the same genus, which would make *albus* Jones a homonym, and possibly also a synonym of the original *albus*. This would provide a confusing tangle of names. There would be *albus* Jones, *nec* Smith, which may be a synonym of *albus* Smith or might be a homonym and need another name. The genotype might be *albus* Jones (*nec* Smith) = *albus* Smith. Is all this necessary ? Why not have a distinctive new name proposed for the zoological genotype when, as, if someone finds that it actually needs a new name and will propose the name " properly ". Until then it can be referred to as *albus* Smith, pending proof whether it is or not the true *albus* Smith.

Point (38)

Article 19, Section 3 (a) (iv) (: 24) : I would suggest omitting " prior to 1931 ". See discussion of this question under Article 6, Section 1 (k).

Point (39)

Article 19, Section 3 (b) (: 125, line 8) : "And all unavailable names " should be omitted. A perfectly good nominal species may be included in a new genus under an " unavailable name " (a homonym), and be accepted as genotype. Note the discussion of Article 19, Section 2 (c), where the rule sets up what may be a homonym as the genotype.

Point (40)

Article 19, Section 3 (i) (: 126) : This is a provision of doubtful value and far-fetched. The only reason for keeping it would be that it might be needed to protect the stability of some important names in general use. The full history of the possible cases would have to be investigated before one knew whether this rule was essential to their stability. I myself know of no need for it.

Point (41)

Article 19, Section 3 (ii) (: 126) : The benefit of the deadline of 1931 is not apparent. If this is considered to be " absolute tautonymy ", should it not be included under that heading and precede " hidden tautonymy " ?

Point (42)

Article 19, Section 4 (b) (: 127) : This is unnecessarily involved and restrictive. A rule which fits better the actual situations and current practice would be :

(b) If an author proposes a new generic name simply as a substitute for a prior name, both names must have the same genotype and the selection of the genotype for one of the names automatically selects it for the other. The genotype in this case must be one of those available for the earlier name ;

(c) If an author proposes a new generic name that he believes should replace a prior generic name, but in his original publication selects as type of the new name one that is not available for the older name (because not included or because the older name already had a different genotype), then his selection stands and the two generic names are subjective rather than objective synonyms.

Point (43)

Article 19, Section 4 (e) (i) (: 129) : If in citing a publication an author made his intention clear, why should not this be sufficient ?

Point (44)

Article 19, Section 5 (b) (: 130) : In lines 15 to 20 change " original author " to " original publication ". (This is what seems to have been intended.)

Point (45)

Article 19, Section 8 (: 136) : See discussion of Article 6, Section 1 (k).

Point (46)

Article 20, Section 1 (d) (: 140) : This is the same question as for genotypes of substitute generic names. See discussion and recommendations for Article 19, Section 4 (b).

Point (47)

Article 20, Section 3 (a) (ii) (: 143) : If an author restricts a type concept to a definite figure, he would logically be restricting the type concept to the specimen or specimens on which the figure was based. The holotype should be the specimen concerned and not a restricted part of the original description of the species. A figure may not be really adequate to determine a species, in which case it would be logical to turn to the specimen from which the figure was made. I think that this section should be revised.

Point (48)

Article 20 (: 145–151) : This seems to give neotypes undue importance and authority, and makes their establishment legalistic rather than a matter of a taxonomic contribution. The real value of neotypes is questionable. If the type of a species name is not extant but its original description or redescriptions of the species by revisors make application of the name clear, a neotype is not needed. If a neotype were made in such a case it would be of neutral value if in agreement with the descriptions but a source of confusion if it did not. If, on the other hand, a species name without a type was not well defined, designation of a neotype by itself would not give a better definition. The author designating the neotype, or some later author could give the needed redefinition, but this could be done with or without establishment of a neotype. The important thing in all such cases is the published redefinition rather than the establishment of the neotype, and the rules should be framed to place the emphasis and authority on the definitions rather than on designated specimens.

Neotypes are part of the general problem of the restriction or redefinition of species, and should be treated in this way. Replacing Article 20 with something like below might be what is needed. Note that the proposal below does not give a lectotype designation preference over a prior restriction of species limits by definition, and that a neotype is not given authority beyond the published description that may be based on it. These provisions discourage selection of lectotypes in unnecessary conflict with the traditional usages of names, and relieve authors of the necessity to study neotypes that are not adequately described.

"A species name applying to a concept that is originally or previously too broad or too poorly defined for use in modern taxonomy may have its concept restricted or clarified in either of the following ways, used alone, jointly, or in sequence.

1. By restricting the original type material to one specimen (lectotype) or several (lectosyntypes).

2. By redefining the concept in a more exact or more restricted way.

In either of the above cases the author's action is to be followed to the extent that he is first revisor, makes his meaning clear, and cannot be proven incorrect. To be correct his concept of the redefined or restricted species must include some part of the original author's concept (as indicated by all available evidence), and must be in conformity with previous restrictions and/or redefinitions.

Material which was used by a revisor in restricting or redefining a species is known as " neotype " material. Neotype material is useful as illustrative of a revisor's opinion but has no nomenclatural force. The force in a revisor's work is in his published definition, as far as this may be adequate. If it is not entirely adequate, some later revisor may supplement it, basing his own work on the same, additional, or on different material."

Point (49)

Articles 21–26 (: 152–190) : Most of this part of the Code is a restatement of things previously covered, or a logical development from them. It contains much that is useful in the way of specific directions but is so largely repetitious that it might make the Rules shorter and easier to grasp if all that is redundant or only elaborative in these articles were relegated to an appendix, to serve as directions for abiding by the Rules already laid down rather than incorporated in the Rules themselves.

Most of the points in Articles 21–26 requiring comments have already received them in connection with previous articles. Comments on points not yet covered are below.

Point (50)

Article 22, Section 5 (c) (i) (: 162) : The required use of parentheses on authors' names is a moot point. It is a matter of opinion whether the trouble of applying them correctly is repaid in added information of equal value. I am convinced that ordinarily it is not fully repaid, and that parentheses should be used on authors' names only in situations where the added information they supply is really needed.

Point (51)

Article 24, Section 4 (b) (: 172) : Since it is common merely to omit diacritical marks, and diacritic marks are not part of the expanded Latin alphabet, it would be better to consider these names homonyms. The absence of diacritical marks from many type fonts and typewriters, and an ignorance among zoologists of their exact meanings in various languages are important practical considerations.

Point (52)

Article 24, Section 6 (d) (: 175) : This should properly be included in Article 13 with the other rules concerning family names. It is a vital question if other portions of Article 13 are to be accepted as written, but of no interest if family-group names are based on the oldest included genus.

Point (53)

Article 24, Section 8 (a), Exception (: 176) : This concerns only some ill-considered recent actions by the Commission and it would be better to undo these rather than to maintain them with a special rule that breaches the general principle.

Point (54)

Article 24, Section 8 (b) (: 176) : The questions of the " ites " ending has been discussed in several places. Here, there seems to be some inconsistency. If such names have no status under the Law of Priority, why should they have status under the Law of Homonymy ? If they are to have this dual status they will have to be catalogued among the valid genera, if for no other reason than to forestall future homonyms. If they are catalogued, they may as well come also under the Law of Priority.

Point (55)

Article 24, Section 11 (: 178) : A secondary homonym is a subjective homonym. It should be rejected only as long as it is considered a homonym and subject to resurrection when needed. I know that there is a variety of opinions on this, but have done enough cataloguing of names to become convinced that the permanent rejection of secondary homonyms is a harmful practice.

Point (56)

Article 24, Section 13 (b) (i) (: 183) : The rule would be better with the elimination of this exception.

Point (57)

Article 24, Section 13 (c) (: 184) : " Discussion ". I agree with the discussion.

Point (58)

Article 25 (: 188) : What is the reason for prohibiting the revival of a suppressed secondary homonym ? The nomenclatural situation is approximately the same as for a suppressed subjective synonym. In either case the suppressed name should be subject to revival and use if changing taxonomic concepts show that suppression is unnecessary.

Point (59)

Article 27 (: 191–243) : (Linguistic regulations.) Scientific names based on good Latin and Greek are much to be desired, and their correct formation should be encouraged by all practical means. Zoological names of the generic and specific levels, however, are legion, and especially in the case of generic names it has been necessary to admit as valid names all sorts of letter combinations with varying degrees of resemblance to classical Latin or Greek. Once proposed and put into use these names become more identified with the animals themselves than with their etymology. Whether or not they are spelled according to certain rules becomes of less importance than the constancy of their spelling. Whatever is an original spelling, that should be the correct spelling for that name. When " correction " of spelling is advised, it is hard to know how far emendations will be carried, and variant spellings will inevitably increase. Any permission for emendations carries with it the question of where to stop emending, which is a question without final answer.

Any name that is an arbitrary combination of letters is acceptable and is not subject to a revision of its spelling, while for words with a meaningful origin there are many exacting rules to be observed, and always the possibility that someone will disagree with the original author and wish to revise the spelling. This situation will encourage most zoologists to use arbitrary combinations of letters for new names, so that their spellings will not be molested.

Article 27 contains some good suggestions for the formations of words, but it is doubtful whether the Greeks and Latins would recognize such rigid rules. Their words were coined, modified, elided, abbreviated, or expanded for euphony and for many of the same reasons that create modern slang. While present day zoologists can never get the feel of these languages as natives, they can clumsily use the same methods of modifying classical or other words and often come out with short, euphonious, and wholly useable names, even if at variance with the rigid rules in Article 27. Such results as these have been and should continue to be used without revisions.

Most of Article 27 should be in the form of " recommendations " rather than " rules ", and the original spelling of scientific names should be considered the only valid spelling except as provided in the comments on Article 11 above.

Point (60)

Article 29 (: 245–270) : (Pertaining to the Commission.) This should not be a part of the Code of Nomenclature, but a separate matter separately decided upon. See the introductory remarks.

DOCUMENT 38/2

(*continued from page* 754)

Draft " Règles " : the expressions " transliteration " and " Latinisation " : Support for proposal submitted by Professor L. W. Grensted

(Commission Reference : Z.N.(S.) 1334)

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Enclosure to a letter dated 18th March 1958)

Appendix F of the old Rules of Zoological Nomenclature is entitled " Transliteration of Greek words ", and in part, but only in part, that is what the table indicates. Where it reads " ρ=r " or " ξ=x ", that is transliteration, which implies representation of the letters of one language in the equivalent letters of another. But where that table reads " final η=a " or " $\epsilon\iota$=i ", that is Latinization, not transliteration, for it indicates, not the Latin equivalent of the Greek letters, but the way that the Romans would have spelled the Greek word in Latin had they taken it over into their own language.

This distinction is quite obvious, but, nevertheless, escaped me until recently Professor Grensted brought it to my attention. I regret that, for that reason, I have written " transliteration " in the Draft of the Revised English text of the *Règles* in instances where " Latinization " should have been used. I therefore fully support the suggestion made by Professor Grensted that throughout the draft wherever the word " transliteration " is used, " Latinization " should be substituted in every case where that is meant, care being taken not to make the substitution in any instance where " transliteration " has been properly used.

DOCUMENT 38/3

Draft " Règles " : Support for Professor Grensted's proposal for the substitution of the word " Latinisation " for the word " transliteration ," with special reference to Article 11, Section 1(a) (emendation of names)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 21st March 1958)

I wish to record my strong support for the proposal submitted by Professor L. W. Grensted, Consulting Classical Adviser to the International Commission, in his statement dated 2nd March 1958 (Document 38/1), in which he recommends that the word " Latinisation " be substituted in the *Règles* for the misleading and incorrect word " transliteration ". This is one of those proposals which, when once made, is seen to have such obvious advantages as to lead to surprise that the action suggested has not been taken long ago.

2. While this proposal of Professor Grensted's was prompted by an examination of the text of Section F of the *Appendice* to the existing *Règles*—where its adoption will materially assist in bringing order into those provisions—the need for this correction in phraseology arises, as Professor Grensted rightly observes, wherever the word " transliteration " is at present used in the main body of the *Règles* in contexts where the meaning actually intended is " Latinisation ". In this connection I should like to draw particular attention to the need for introducing the revised expression in the provisions relating to the emendation of names which were formerly included in Article 19 of the *Règles* and which, in the revised form approved by the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 43, Decision 71(1)(a)(i)), now appear in Section 1(a) of Article 11 of the Draft of the *Règles* to be considered by the London Congress (1957, *Bull. zool. Nomencl.* **14** : 88, line 9).

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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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CASE No. 43

ARTICLE 20, SECTIONS 1–3 : TERMINOLOGY OF TYPE SPECIMENS

(Commission Reference : Z.N.(S.) 1347)

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DOCUMENT 43/1

Proposed increase in the number of categories of type specimen recognised in the " Règles "

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Enclosure to a letter dated 21st April 1958)

Article 20 of the Draft Code recognises holotype, lectotype, syntype and neotype as terms needing definition and explanation. Sabrosky suggests that the term " paratype " should also be mentioned. I agree, and would further suggest that there remains another category, of special nomenclatural significance, that should be specially mentioned in the Code, and that is that of the rejected syntypes—rejected by the designation of some other syntype as lectotype. These specimens are of special nomenclatural significance because they have passed through a change of nomenclatural status. Before the designation of a lectotype, they had equal standing with the other syntypes as possible name-bearers. After the valid designation of a lectotype, they ceased to rank as possible name-bearers, and now rank as if they had originally been paratypes. Oddly enough, no special name seems yet to have been proposed for this category, although both the terms " metatype " and " paratype " have been used (incorrectly, according to the original definition of those terms). If a term is thought to be necessary, " parasyntype " might be thought suitable.

DOCUMENT 43/2

Objection to the proposal to incorporate the expression " paratype " in the " Règles "

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 22nd April 1958)

In a note submitted by Mr. P. C. Sylvester-Bradley[1], it is proposed, *inter alia*, that the expression " paratype " should be recognised and defined in the revised addition of the *Règles*.

2. In this connection, it will be convenient to recall that the question whether the expression " paratype " should be recognised in this way was considered by the Commission and the Congress at Paris in 1948. The following is an extract from the Decision then taken in this matter (1950 : *Bull. zool. Nomencl.* **4** : 185, *Decision* 75(c)) :

> (c) The categories of type specimens which it was desirable should be recognised and defined in the *Règles* were those which possessed a direct nomenclatorial significance, namely, holotypes, syntypes and lectotypes. It was not necessary to recognise paratypes, for, although paratypes were of great practical value in many ways, they possessed no nomenclatorial significance, since in any given case they came into existence only when a holotype was designated or a lectotype selected.

3. It appears to me that the view formed in this matter by the Paris Congress is as valid today as it was ten years ago and I accordingly recommend that the proposal that the expression " paratype " should be recognised in the *Règles* should be rejected.

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[1] See Document 43/1

CASE No. 44

DRAFT " REGLES ", ARTICLE 7, SECTION 4, SUBSECTION (6) : STATUS OF NAMES IN PREPRINTS WHEN THE PAPER CONCERNED WAS NOT PUBLISHED LATER IN A REGULAR MANNER

(Commission Reference : Z.N.(S.) 1348)

DOCUMENT 44/1

Support for the proposal included by Professor Chester Bradley in the suggested Annexe to Subsection (6) of Section 4 of Article 7 of the Draft " Règles "

By **CYRIL F. DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Extract from a letter dated 22nd March 1958)

I agree with the proposed addition to Article 7, Section 4(6), lines 18–22 made by Professor Bradley. It would cover the important case of Henry Edwards's " Pacific Coast Lepidoptera " and any similar situations. If this addition to subsection (6) is adopted, it would be necessary to provide that this paragraph be made to apply after a certain date, as originally suggested by me to Professor Bradley.

DOCUMENT 44/2

Proposed rejection of Professor Bradley's proposal in Article 7, Section 4 (6, Annexe) for the acceptance in certain circumstances of new names included in pre-prints

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 30th March 1958)

In the Annexe to Subsection (6) of Section 4 of Article 7 of the Draft of the English text of the *Règles*, Professor Chester Bradley, after including the Congress decision that names included in preprints acquire thereby no status in zoological nomenclature, has added a new proposal of his own that nevertheless such names should be accepted " if the publication that was to have contained the separatum is never subsequently published ".

2. At first sight the above appears a reasonable proposal but on closer inspection it appears to me to be open to serious objection. In any case, if it is to be accepted, it will need to be redrafted in order to eliminate the ambiguity inherent in the use in this context of the word " never ".

3. I feel sure that no one would favour a provision under which new names included in a preprint would be initially rejected but would nevertheless be liable to be brought to life with priority as from the date on which they were originally given an irregular currency if at any later date the paper concerned was to be published in a regular manner. For such a provision could lead only to doubt and uncertainty and might in certain circumstances lead to confusion and name-changing.

4. I accordingly consider that, if a proposal on the lines suggested is to be accepted, the dangerous (because ambiguous) word "never" should be replaced by some word having a precise meaning. This might be done by the insertion of some time-limit after the expiry of which names included in a preprint would become an available name with retrospective priority as from the date on which the pre-print was originally issued, unless in the meantime the name had been duly published, in which case the names concerned would rank for priority only as from the later date on which due publication took place.

5. On balance my advice would be that the suggested Annexe to Section 4(6) of Draft Article 7 should be rejected. Its only purpose is to provide a basis for regularising the position of names irregularly brought into currency by being introduced in preprints. As shown above it would not be easy to frame a provision that would secure this end in a clear-cut and logical manner. That this should be so is not surprising, for it is seldom possible to frame a satisfactory provision when that provision is intended not to deal with a question of principle but to provide in certain circumstances a solution which is at variance with the general principle adopted. It was to escape from this dilemma that over forty years ago the Ninth International Congress of Zoology, Monaco, 1913, decided that, where it was desirable in some particular case that an exception should be made to the normal provisions of the *Règles*, the machinery for so doing should not take the form of qualifications to the provisions in the *Règles*, the possibility of obtaining the end desired being provided by the grant to the International Commission of Plenary Powers for dealing with particular cases where otherwise confusion might arise. I would agree that it is desirable that means should be found for assuring the status of new names introduced by Henry J. Edwards in his "Pacific Coast Lepidoptera" (the case cited in the Draft), but I consider that it would be much better that this end should be secured by the use by the Commission of its Plenary Powers than by the insertion in the *Règles* of some illogical *ad hoc* provision.

6. For the reasons set out above I recommend that the provision proposed to be annexed to Section 4(6) of Article 7 of the Draft *Règles* (1957, *Bull. zool. Nomencl.* **14** : 67, lines 18–22) be rejected.

CASE No. 45

DRAFT " REGLES ", ARTICLE 28 : COMPOUND NAMES OF SPANISH ORIGIN

(Commission Reference : Z.N.(S.) 1349)

DOCUMENT 45/1

Proposed correction of certain inaccuracies in Professor Bradley's Draft

By **R. ALVARADO**

(*Instituto José de Acosta, Museo Nacional de Ciencias Naturales, Madrid*)

(Letter dated 24th March 1958)

The attention of the International Commission on Zoological Nomenclature should be drawn to certain erroneous entries that I have found in Professor Bradley's Draft. These are as follows :—

Professor Bradley says on page 195 (lines 27–28) : " In such Spanish compound names the first name is actually the surname of the bearer's mother, and should not be employed. In Portugese it is the reverse ". Of course it is the reverse of " the reverse ".

A Spaniard bears a forename (the Christian name) and two surnames. The former is the surname from his father, the mother's surname is the second. For instance, Professor Ignacio Bolivar Urrutia (not Urutia) bore at first " Bolivar ", and sometimes is so named. His son is Professor Candido Bolivar Pieltain.

I think, but I am not sure, that the Portugese bear the names in the reverse order.

Also, and this is a little question, on page 200 (line 22) it is suggested that Aguilar-Amat is a Portugese zoologist. In truth Aguilar-Amat is a family name (of Barcelona to be precise) and is a surname of a well-known malacologist.

CASE No. 46

DRAFT " REGLES ", ARTICLE 1, SECTION 1 AND ARTICLE 21, SECTION 2 (IMPLICATIONS OF THE TYPE CONCEPT)

(Commission Reference : Z.N.(S.) 1351)

DOCUMENT 46/1

Comments on Article 1, Section 1, and Article 21, Section 2 in Professor Bradley's Draft " Règles "

By **R. A. CROWSON**

(*Department of Zoology, University of Glasgow, Glasgow, Scotland*)

(Enclosure to a letter dated 8th March 1958)

From Article 21, Section 2, paragraphs i–ii of the Draft, it would appear that according to Professor Bradley, a specific name can be said to denote objectively only a holotype. On the same principle, a generic name could be said to denote objectively only its nominal type species, and a family-group name only its nominal type-genus. Thus the Article appears to imply that all that any taxonomic name can designate objectively is a single specimen, a holotype ; the wider denotation, of such other animals as a given taxonomist chooses to regard as related to it in the given degree, would in Professor Bradley's parlance be subjective. This implication seems to me to conflict with the terms of Article 1, Section 1 of the same Draft. For myself, I would not wish to see the implications of either Article 1, Section 1 or Article 21, Section 2 embodied in the new International Code of Zoological Nomenclature. In my opinion, a taxonomic name denotes a very definite concept, namely that a given assemblage of animals are related to each other in a given degree and can be recognised as such by a given set of characters ; furthermore it is implied that any animal (living or fossil) discovered in the future which possesses this combination of characters shall also be subsumed under the same name. The concept may be mistaken in that the forms included by the definition prove not to constitute a natural relationship-group or more subjectively in that the later opinion may prefer to alter the status given to the group.

I believe that the root of many of our difficulties lies in the misguided attempt to establish nomenclature as a subject in its own right, independent of systematics, seeking for its own (supposedly) objective standards while slighting as " subjective " the judgment of systematists. The evidence usually quoted for the subjectivity of systematists' judgment is the relative frequency of changes of view concerning the constitution or status of systematic groups ; while admitting that there is some justice in this accusation systematists might well retort that the decisions of the International Commission itself might by the same criterion be accused of " subjectivity ".

CASE No. 47

ARTICLE 19, SECTION 7(a) : MISIDENTIFICATION OF A SELECTED TYPE SPECIES FOR A GENUS

(Commission Reference : Z.N.(S.) 1350)

DOCUMENT 47/1

Criticism of provision suggested in Article 19, Section 7(a) of the Draft " Règles "

By **R. A. CROWSON**

(*Department of Zoology, Glasgow University, Glasgow, Scotland*)

(Enclosure to a letter dated 8th March 1958)

In Section 7(a) of Article 19 (1957, *Bull. zool. Nomencl.* **14** : 135) the new Draft Code seems to exalt the function of naming above that of classifying. The care and the special knowledge of the group that went into the systematist's selection of a type species for a genus are, it appears, as nothing in the eyes of our legislators compared with immense ritual importance of the quoting of a name. If the new Code is to incorporate this provision, a systematist wishing to make certain of establishing a given species (not a name) as the type of an already named genus might be driven to take a rather devious procedure. His best method might be to name the species and genus as new, leaving posterity to work out the synonymy. A particular case where the application of the proposed article is likely to create considerable confusion concerns the genus *Lema* F. (Coleoptera CHRYSOMELIDAE). As originally proposed by Fabricius, *Lema* was completely synonymous with *Crioceris* Geoff. (Geoffroy's work was not strictly binomial in that he used French endings for his specific names, but if *Crioceris* is not given priority from his work, further nomenclatorial troubles are likely to result). The establishment of *Lema* as a genus distinct from *Crioceras* is due to Lacordaire (1845) ; though not citing particular species as types of either genus, he separated them in such a way that it was possible to designate types which would validate both genera. In fact, Curtis has already (1830) named *Chrysomela asparagi* L. as the type of *Crioceris*, and Lacordaire's usage of the name was in accordance with this designation. No type appears to have been designated for *Lema* until 1908, when Jacoby cited *L. cyanella* L. Unfortunately there has been confusion over the application of this name—though there need never have been any doubt over the species that Jacoby intended to designate. In the British Museum collection (arranged by Jacoby himself), in the Jacoby and Clavareau part of Wytsman's " Genera Insectorum " (1904), and in Clavareau's contribution to Kunk's " Coleopterorum Catalogus " (1913), *L. cyanella* L. is consistently synonymised with *L. punticollis* Curtis. Subsequent opinion has however swung to equating *cyanella* L. with *L. lichenis* Voet, belonging to quite a different species group from *puncticollis*. From material seen by me in the Banks and Hunterian collections, it is evident that Fabricius confused the two species (*lichenis* Voet and *puncticollis* Curtis) under the name *cyanella* L., indeed at one stage it seems to have been believed that they represented the two sexes of one species. Now *L. lichenis* belongs to a comparatively small and well-marked group of species later separated off by Heinze (1927) in a new genus *Hapsidolema*, so that if the ruling laid down in Article 19 section 7(a) is adopted, *Lema* will become a senior subjective (because based on a different type species) synonym of *Hapsidolema* Heinze, and a new name will have to be found for the main part of the old genus. *L. puncticollis* Curtis on the other hand belongs in the main part of the genus, in fact is the only European representative of it (all others being *Hapsidolema*) and was no doubt specially selected by Jacoby for that reason. Certain old (and disused) generic names of dubious application seem to have included some species of *Lema*, for example *Oulema* Gozis and *Auchenia* Thunb.; numerous subgeneric names have been published in recent times by Heinze, Pic and Monros, and the problem of finding a valid replacement for *Lema* is likely to be complex. I may add that *Lema* is a large and widely distributed genus, containing several species of some economic importance.

CASE No. 48

DRAFT "REGLES", ARTICLE 13, SECTION 3(c): FAMILY-GROUP NAMES CONSISTING OF VERNACULAR WORDS

(Commission Reference : Z.N.(S.) 1352)

DOCUMENT 48/1

Suggested definition of the expression "vernacular word" as applied to family-group names

By **R. A. CROWSON**

(*Department of Zoology, University of Glasgow, Glasgow, Scotland*)

(Enclosure to a letter dated 8th March 1958)

It would be desirable to add a definition of the term "vernacular word" used in this Section. For example, in the greatest work that has ever been published on the classification of the Coleoptera, Prof. Lacordaire uses French endings for the family-group names, many of which he is there proposing as new. Does this mean according to the proposed new Code the whole of Lacordaire's family-group nomenclature is to be regarded as unavailable ? If so, would not this constitute an example of the undesirable effects of retroactive legislation ?

DOCUMENT 48/2

Need for relaxing the severity of the Copenhagen Rule against the acceptance of family-group names consisting of vernacular words

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 15th March 1958)

In a general survey of the experience gained in the Office of the Commission in the practical application of the Copenhagen Rules in regard to family-group names during the last five years (1958, *Bull. zool. Nomencl.* **15** : 187–193) which has been placed on the London Agenda Paper as Document 5/1, I have expressed the conviction (: 190–191) that the Copenhagen Rules on the subject of family-group names consisting of vernacular words (1953, *Copenhagen Decisions zool. Nomencl.* : 36, Decision 53(2)) are unduly restrictive and require relaxation in the interests of nomenclatorial stability. The strong support for that view given by Mr. R. A. Crowson (*Glasgow University*) in his note on the name-changing which would result in the nomenclature of the Order Coleoptera (Class Insecta) if under the provision referred to above the family-group names introduced in the vernacular by Lacordaire were to be rejected is particularly opportune, being based—as it is—not upon theoretical grounds but upon practical experience.

2. At this point it is necessary to draw attention to the fact that in the Draft of the Revised English text of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 97) Professor Chester Bradley has (1) inserted the Copenhagen Decision in a form considerably more restricted than that in which it was actually taken by the Congress and (2) has qualified the Copenhagen Decision even in the form so restricted by a note that the safeguard so provided " must be revoked, since it violates the requirement that a zoological name must be Latinised. Professor Bradley adds that " any particular case can be handled by the Commission under its Plenary Powers ".

3. On the question of procedure I cannot see that the London Congress is under any obligation to cancel the portion of the Copenhagen Decision referred to by Professor Bradley, though naturally in this as in other cases it would be open to the Colloquium to submit a recommendation in this sense to the London Congress, if it thought it proper so to do.

4. On the strictly logical plane Professor Bradley has, as I think it will be agreed, a point when he urges the reversal of the qualified acceptance by the Copenhagen Congress of family-group names consisting of vernacular words, for it does appear inconsistent at first sight to ban generic and specific names consisting of vernacular words, while accepting words of this type for family-group names. It seems to me however that this is a matter which should be judged against the historical background and where the decision to be taken should be based upon regard for maintaining stability and continuity in nomenclature rather than upon narrow considerations of logic and symmetry.

5. If we look at this matter from the foregoing strictly practical standpoint we see that there is nothing to be said in favour of the total rejection of all family-group names consisting of vernacular words, for in many cases at the beginning of the last century such names were introduced by leading zoologists, notably in France, and those names—in a corrected Latinised form—have been accepted by later workers. The rejection of such names and their attribution to the first subsequent author by whom they were published in due Latinised form would be most confusing and in some cases would lead to the rejection of the name in question through the interposition of some subjective synonym which under a rule such as that discussed above would take priority.

6. In general, I share the view expressed by Professor Bradley that, where cases arise which present exceptional features, it is better that these should be dealt with by the Commission under its Plenary Powers rather than that the manner in which such cases should be handled should be written directly into the text of the *Règles*. I do not feel, however, that these considerations are applicable in the present case because it is likely that the number of cases where in the interests of nomenclatorial stability it would be desirable to conserve family-group names originally published as vernacular words is relatively large. In these circumstances an undue burden would be imposed both upon specialists and upon the Commission itself if it were necessary for each such case to be submitted individually to the Commission. On this part of the subject therefore I conclude that the Copenhagen Congress was well advised to make express provision in the *Règles* for the class of case here under consideration.

7. My recommendation in the interests of nomenclatorial stability is therefore :—

(1) that Professor Bradley's proposal (*Bull.* **14** : 97, lines 17 to 19) for the cancellation of the decision by the Copenhagen Congress in favour of the acceptance in certain circumstances of family-group names consisting of vernacular words be rejected ;

(2) that at the least Section 3(c) of the Draft Article 13 should be amended so as to bring it into conformity with the decision actually taken by the Copenhagen Congress (: 36) ;

(3) that, as an advantageous alternative to (2) above, consideration should be given to the question of strengthening the Copenhagen Decision so as to provide that, while normally family-group names consisting of vernacular words should be rejected, such names (a) are nevertheless to be accepted where otherwise existing nomenclatorial practice would be disturbed, and (b), when once so accepted, are not to be rejected without the prior approval of the Commission.

CASE No. 49

DRAFT " RÈGLES ", ARTICLE 27 : ZOOLOGICAL NOMENCLATURE LATIN

(Commission Reference : Z.N.(S.) 1042)

DOCUMENT 49/1

Twofold problems raised by Article 27 of the Draft " Règles "

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 10th April 1958)

In March 1957 I prepared for the consideration of the International Commission a note asking for a Ruling clarifying the status under the *Règles* of names published in an abbreviated form—such as name *leucoryn.* Linnaeus, 1771, as published in the combination *Lanius leucoryn.* (Hemming, 1957, *Bull. zool. Nomencl.* 13 : 210–212). Later I submitted a supplementary note prepared for the purpose of covering zoological names consisting of abbreviated versions of the names of persons—for example, the name *alowensi* based on the initials and surname "A. L. Owens "—to which attention had been drawn by Mr. Arthur N. Dusenbury, Jr. (*Jusepin, Monegas, Venezuela*) (Hemming, 1957, *Bull. zool. Nomencl.* 13 : 299–302).

2. In the time available it would not be possible before the forthcoming International Congress of Zoology (a) for the International Commission to reach decisions on the foregoing matters and (b) for the decision so taken to be embodied in a *Declaration* and for that *Declaration* to be duly published. It has accordingly been decided not to proceed by way of *Declaration* but instead to place the problem involved on the London Agenda Paper as Case No. 49. The papers referred to above are being reproduced as Document 49/2.

3. Quite recently papers have been received from Professor J. Chester Bradley (*Cornell University, Ithaca, N.Y., U.S.A.*) and Dr. L. R. Cox (*British Museum* (*Natural History*), *London*) on another aspect of Article 27 in the Draft of the Revised *Règles* (1957, *Bull. zool. Nomencl.* **14** : 191–192), namely, the acceptability under the *Règles* of arbitrary combinations of letters when owing to lack of vowels the resulting word is one which—quite apart from the lack of an appropriate termination—could not possibly be held to constitute a Latin word. The papers so received have also been registered as components of Congress Case No. 49.

DOCUMENT 49/2

Specific names published in abbreviated form : proposals published in 1957 for the adoption of a " Declaration " defining status of, under the " Règles "

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

Document 49/2, Part 1

Proposed adoption of a " Declaration " clarifying the procedure to be adopted under Article 14 when a specific name is published in an abbreviated form

(First published in June 1957, *Bull. zool. Nomencl.* **13** : 210–212)

The purpose of the present application is to ask the International Commission on Zoological Nomenclature to render a *Declaration* clarifying the procedure to be followed under Article 14 of the *Règles* in cases where a specific name is published in an abbreviated form. This question was first brought to notice by Dr. Ernest Mayr (then of the *American Museum of Natural History, New York*) in a letter dated 10th March 1952 and it was agreed upon between us that I should bring this matter before the Commission at a convenient time. Several examples are now available where the present problem arises and the opportunity is accordingly taken to place this matter before the Commission.

2. The nature of the problem may be illustrated by the following cases :—

(a) Among the names by Linnaeus published in 1776 in the *Catalogue* prepared in connection with Edwards's *Natural History* was the specific name " *americ.*" which appeared in the combination *Vermivora americ.* (Linnaeus, 1776, *Cat. Birds Beasts Fishes Ins. Edwards's Nat. Hist.* : 13).

(b) A specific name was published in the abbreviated form " *merid.*" for a species of *Micronisus* by Hartlaub in 1860 (*Proc. zool. Soc. Lond.* **1860** : 109).

(c) In 1771 Linnaeus published a specific name in the abbreviated form " *leucoryn.*" in the combination *Lanius leucoryn.* (Linnaeus, 1771, *Mantissa Plant* : 524).

3. At the time when this matter was before Dr. Mayr and myself in 1952 only the first two of the foregoing examples was available. These resembled one another in that in each case it was perfectly clear what the specific name in question would have been if it had not been published in an abbreviated form, for clearly "*americ.*" was an abbreviation for "*americana*" and "*merid.*" an abbreviation for *meridionalis*. The question which we then considered together was the nature of the action which the International Commission should be advised to prescribe for the purpose of giving valid force to the spelling-out in full of the names in question. Such a Ruling appeared to be necessary in view of the fact that some zoologists had taken the view that under the Law of Priority it was necessary in such cases to retain for all time the abbreviated form in which the names concerned had originally been published. This seemed to us to be altogether too ritualistic a view and to constitute a violation of the spirit of the *Règles*.

4. At the same time we considered the situation which would arise if it were not clear how a specific name originally published in an abbreviated form ought to be spelled out. On this we took the view that recourse to the Commission would be needed in each such case as it arose. We had not, however, before us at that time an actual example of a situation of this sort. Quite recently, however, Dr. Kenneth C. Parkes (*Associate Curator of Birds, Carnegie Museum, Pittsburgh, Pennsylvania, U.S.A.*) has brought to the attention of the Office of the Commission the name published by Linnaeus in the abbreviated form *Lanius leucoryn*. This was a very good example, for, as Dr. Parkes has reported, this name has been spelled out by different authors in at least four different ways, namely: (i) *leucorynchos*; (ii) *leucorynchus*; (iii) *leucorhynchos*; (iv) *leucorhynchus*. Quite clearly this is a case where the spelling to be adopted when the abbreviation "*leucoryn.*" is spelled out can be settled only by an express Ruling by the International Commission.

5. The proposal now submitted is that the International Commission should render a *Declaration* in the following terms:—

Draft of suggested "Declaration"

(a) Where a specific name is published in an abbreviated form and it is evident what would be the correct spelling for that name if it were spelled out in full, it is to be so spelled out.

Example: In the case of a specific name published in the abbreviated form "*americ.*", it is evident that, when spelled out, that name would be *americanus* (*-a*). Accordingly, such a name is to be so spelled out.

(b) Where a specific name is published in an abbreviated form and it is not evident what would be the correct spelling for that name if it were spelled out in full, the question is to be referred to the International Commission for decision.

Example: In the case of a specific name published in the abbreviated form "*leucoryn.*" it is not evident whether the intention of the author was to use the spelling "*leucorynchus*" or the spelling "*leucorynchos*", quite apart from the fact that both the foregoing spellings are technically defective in that the letter "h" which should appear between the letters "r" and "y" was omitted in the abbreviated form employed. In such a case the question of the spelling to be used when this name is spelled out should be referred to the Commission for decision.

(c) *Recommandation*: Authors and editors are recommended to avoid the publication of specific names in abbreviated form.

6. As regards the individual names cited above in the present application no problem arises in connection with the first (*americ.* Linnaeus, 1771, as published in the combination *Vermivora americ.*), for the work in which this name appeared has been suppressed by the Commission under the Plenary Powers in *Opinion* 412 (1956, *Ops. Decls. in.. Comm. zool. Nomencl.* **13** : 203–232), when also the specific name in question was placed on the *Official Index of Rejected and Invalid Specific Names in Zoology*. As regards the two other names concerned, a note has been made in the appropriate Commission File that the matter is to be reviewed as soon as a decision has been taken on the present application.

DOCUMENT 49/2, Part 2

Proposed amplification in certain respects of the suggested " Declaration " relating to the procedure to be adopted under Article 14 when a specific name is published in an abbreviated form

(First published in December 1957, *Bull. zool. Nomencl.* **13** : 299–302)

Two suggestions are here put forward for the amplification of the *Declaration* which I recommended in Application Z.N.(S.) 1042 (1957, *Bull. zool. Nomencl.* **13** : 210–212) should be adopted by the International Commission for the purpose of clarifying the procedure to be adopted under Article 14 of the *Règles* in the case of a specific name published in an abbreviated form.

2. These suggestions are :—

(a) a proposal submitted by myself arising out of a letter which I recently received from Mr. Arthur N. Dusenbury, Jr. (*Creole Petroleum Corporation, Jusepin, Monagas, Venezuela*);

(b) a proposal submitted by Professor J. Chester Bradley (*Cornell University, Ithaca, N.Y., U.S.A.*) in a note in which he recorded his support for the adoption of the *Declaration* which I had recommended.

3. The proposal now submitted by myself has as its object the exclusion from the scope of the proposed *Declaration* of a specific name consisting of a word compounded (i) of the surname of a person, and (ii) preceded by one or more of that person's initials. To take one of the examples cited by Mr. Dusenbury, it was never my intention to recommend that a specific name consisting of the word " *alowensi* ", composed of a latinised version in the genitive singular of the modern surname " Owens ", preceded by the initials "A.L.", should be expanded to include a full writing-out of the names represented by above initials "A.L." even if the words represented by these initials could be ascertained. The proper course in my view, is that such a name as *alowensi* should be treated as an arbitary combination of letters in the same way as the International Congress of Zoology, Paris, 1948, directed that a specific name consisting of a phonetic reproduction of the initials of persons should be treated. Mr. Dusenbury's letter and my reply are reproduced in Annexe 1 to the present note. The proposal which I submit for the clarification of the above matter is set out in paragraph 4 of my letter to Mr. Dusenbury.

4. Professor Bradley's proposal, which is reproduced in Annexe 2, is that the *Declaration* should provide that in the case of a name published after the close of 1957 no name published in an abbreviated form, other than a name compounded of a cardinal number printed as a number instead of being printed as a word, should possess any status in zoological nomenclature.

5. Finally, it would, I think, be well that it should be made clear in the *Règles* in some appropriate form that no generic name, whatever its date of publication, possesses the status of availability if published in an abbreviated form. This provision seems to be necessary, for a generic name, to be acceptable, should be published in such a way as to make it clear at once to all zoologists—and not merely to specialists in the group concerned—whether it is a homonym of some previously published name and whether a given name, if subsequently published, would be liable to rejection as a junior homonym of a name published in this objectionable way.

ANNEXE 1

Correspondence between Arthur N. Dusenbury, Jr. (Jusepin, Monagas, Venezuela) and Francis Hemming, Secretary to the International Commission on Zoological Nomenclature

(a) Letter dated 4th August 1957 addressed by **Arthur N. Dusenbury, Jr.** to **Francis Hemming**

Specific names published in an abbreviated form

Floyd Hodson (1926, " Venezuelan and Caribbean Turritellas ", *Bulletins of American Paleontology* **11** (No. 45) : 201, 204–205) described two new fossil gastropods which he named " *Turritella plebeia* Say *A-L- Owensi*, n. subsp." and " *Turritella G-A- Weaveri*, n.sp.". Because of the rules against capitalisation of specific names and against the employment of hyphens in specific names, the paleontologists of our company have been writing these names as " *alowensi* " and " *gaweaveri* ". Hodson's description of these forms states that the first was " named in honor of Mr. A. L. Owens, Geologist for the Standard Oil Company of Venezuela " and that the second was " named in honor of Mr. G. A. Weaver who was an invaluable collaborator in the field work during 1924–25 ".

Obviously, initials are a form of abbreviation, hence, if your proposal (*Bull. zool. Nomencl.* **13** : 210–212) to spell out all abbreviated specific names is adopted, as I think it should be, it would necessitate emending Hodson's names to include the complete first and middle names of the two geologists honoured by him. By referring to old membership lists of the American

Association of Petroleum Geologists, I find that A. L. Owens is Allen L. Owens and that G. A. Weaver is George A. Weaver, but I have so far been unable to ascertain their middle names. Doubtless, this could be accomplished with sufficient expenditure of time and effort. Do you advise me to pursue this course ? Or can you suggest an easier one ?

(b) Reply dated 10th September 1957 addressed to **Arthur N. Dusenbury, Jr.** by **Francis Hemming**

Names published in an abbreviated form

In reply to your letter of the 4th August, I should explain that it was my intention in putting forward Application Z.N.(S.) 1042 (Hemming, *Bull. zool. Nomencl.* **13** : 210–212) to seek a decision from the Commission as to the treatment to be accorded to names published in an abbreviated form in cases where the words of which those names consisted were either Latin or Latinised words of a clearly recognisable kind. You will remember that the example which I cited was that of the word " americ." which was clearly an abbreviated form of the Latinised word " americanus ".

2. It was certainly no part of my idea that the proposed *Declaration* should involve the writing out in full of the initials of the first name or first names of a zoologist in those cases where such initials were incorporated with the surname of that zoologist in a specific name.

3. In my view, it is very undesirable that specific names should be formed in this way. When, however, such a name is published, it should be treated in the same way as names based upon a phonetic reproduction of the initials of a zoologist, as regards which a Ruling has already been given by the International Congress of Zoology. This latter problem was raised by Mr. R. G. Fennah in connection with the name *veedee* published by Ross in 1943 in the combination *Aglaostigma veedee*. Fennah explained that this specific name was presumably intended to represent the initials " V.D." written phonetically, these letters being the initials of E. C. Van Dyke and E. P. Van Duzee, both of whom were listed as collectors of the species concerned. (Fennah, 1945, *Bull. zool. Nomencl.* **1** : 8–9). This application was considered by the Commission in Paris in 1948 and it was then decided to ask the International Congress of Zoology to insert words in the *Règles* which would secure that a name such as *veedee* Ross would become an available name (see 1950, *Bull. zool. Nomencl.* **4** : 252). The basis of the decision then taken was that a name such as *veedee* should be treated as an arbitrary combination of letters.

4. In order to make this matter absolutely clear I propose, now that you have raised this special case, to recommend to the Commission that the following new Point (c) should be inserted in the proposed *Declaration*.

(c) The foregoing provisions do not apply to a specific name based upon a modern patronymic comprising not only the surname, but also one or more of the initials, of the person in whose honour the specific name was devised, a name so published to be treated as an arbitrary combination of letters.

5. I propose further to recommend that the " Recommendation " which now forms Point (c) of the proposal, which would become Point (d), should be expanded to cover names falling in the suggested new (c) above as well as in the original (a) above, that is to say that it should be recommended that authors should avoid (i) publishing specific names in abbreviated form, and (ii) devising specific names consisting of words comprising the initials of a person as well as that person's surnames.

(c) Letter dated 6th October 1957 addressed by **Arthur N. Dusenbury, Jr.** to **Francis Hemming**

I am very much pleased with your solution of the problem of the specific name based upon a modern patronymic and including initials, and I wish to support your proposed recommendation to the Commission covering the point I raised. Your selection will promote stabilisation of the nomenclature, for it will allow us to continue to use the name *Turrutella plebeia alowensi* Hodson and *Turritella gaweaveri* Hodson as before.

ANNEXE 2

Support for and proposed extension of the " Declaration " suggested by Secretary Hemming to cover the case of a name proposed in an abbreviated form

By J. CHESTER BRADLEY

(*Cornell University, Ithaca, N.Y., U.S.A.*)

I wish to express my support of the *Declaration* proposed by the Secretary. But the practice of proposing a name in abbreviated form is so abominable that I recommend that it be outlawed for the future. Therefore, may I suggest the following provision to replace paragraph (c), the " Recommendation ".

" Subsequent to the year 1957, the name of a taxon proposed in an abbreviated form shall have no status in nomenclature, either under the Law of Priority, or the Law of Homonymy. But this shall not be construed to apply to a name compounded with a cardinal numeral which is not written as a word ".

DOCUMENT 49/3

Support for action proposed in relation to names published in an abbreviated form

By **F. A. URQUHART**

(Head, Division of Zoology and Palaeontology,
The Royal Ontario Museum, Toronto, Canada)

(Letter dated 30th January 1958)

I was most interested in the discussion of proposing a name in abbreviated form. It is indeed surprising that any taxonomist would consider using initials in the name of a taxon.

I certainly support the *Declaration* proposed by you, and I whole-heartedly agree with the recommendation put forth by J. Chester Bradley that subsequent to 1957, the name of a taxon proposed in an abbreviated form shall have no status in nomenclature except for a name using a cardinal numeral which is not written as a word.

DOCUMENT 49/4

Views of Professor J. Chester Bradley (Cornell University, Ithaca, N.Y., U.S.A.)

(a) Letter dated 10th February 1958 addressed to the Secretary by **J. CHESTER BRADLEY**

Cases like " alowensi " and " gaweaveri " are one thing. Suppose that all initials and the first letter of the surname were to be consonants or even vowels : John James Johannsen—J. J. Johanseni would become a stuttering jjjohannseni ; A. A. Allen—aaalleni ; J. R. G. Srb (the surname of a colleague of mine on the Cornell faculty)—jrgsrbi.

Such cases could be guarded against by adding to your point 4(c) on p. 302 : Provided that the word thus formed is pronouncable in Latin. Otherwise the initials shall be eliminated.

I am not sure but that it might be better to rule that initials should be eliminated in all cases, or at least in all cases where they were not originally coalesced with the surname. We have been at some pains to lay down rules for the formation of names indicating personal dedication ; it seems too bad to mar them by the admission of monstrosities, even on the grounds of their being arbitrary combinations of letters.

But perhaps we should go further. There is no sentiment against the basic rules that the language of our nomenclature is Latin, and that names must be Latin or Latinized or an arbitrary combination of letters treated as a Latin word. Ought we not to provide that words of the two latter classes must be pronouncable in the Latin language ? I do not think that *srbi* can be regarded as a Latinized word. Would it not be desirable to provide that if a surname cannot be pronounced in Latin in its original form it shall be so emended that its Latinized spelling will represent the pronunciation of the name in the original language ? I understand that Professor Srb pronounces his name as Serb. Then a Latinized name dedicated to him should be *serbi*, not *srbi*. I am not committed to any of these ideas.

(b) Letter dated 20th February 1958 addressed to J. Chester Bradley by **FRANCIS HEMMING**, Secretary to the Commission

I agree that when we jointly considered this mater before publication we neither of us thought of a case where a name might be formed by such a combination of initials with a surname as to be quite unpronounceable. I agree also that some safeguarding words ought to be added. We cannot, however, I am sure, insert a provision as to what is or is not pronounceable in Latin, because nobody knows how in fact the Romans pronounced their language. What we can, however, do, and what I think we ought to do, is to insert a proviso invalidating such a name if the first portion of it consists of a combination of consonants of a kind which would be impossible in Latin. A proviso of this kind would rule out the sort of cases cited in the first paragraph of your letter.

As regards the third paragraph of your letter, I agree that where a name is published in the manner discussed above but the initials are not coalesced with the surname, the zoological name so formed should be rejected as not complying with the provisions of the *Règles*.

As regards the point raised in the final paragraph of your letter, I think that the first of the suggestions put forward above, if generalised so as not to apply only to cases of names formed of initials plus surnames and thus made to apply to all cases where zoological names are based on arbitrary combinations of letters, would meet the case which you have in mind and which I agree it is desirable should be taken care of. Personally, I already take the view that a specific name consisting of the letters *srbi* does not comply with the requirements in the *Règles* that names must be Latin or Latinized, or treated as such, and therefore that a name consisting of the above letters is under the existing rules already invalid.

(c) Letter dated 23rd March 1958 addressed to the Secretary by

J. CHESTER BRADLEY

I am glad that we think alike in regard to this matter. I do not, however, fully share your view about not referring to Latin pronunciation. *Bull. zool. Nomencl.* **4** : 245, paragraph 8, recognizes the fact that zoological nomenclature is a living language. Neolatin is the official language of the Roman Catholic Church, and its pronunciation throughout the ages has not been a matter of question. It is true that in pronouncing classical Latin in modern times, the " English ", the " Continental " and the " Roman " methods have been employed, but the differences lie in how certain vowels shall be pronounced, on whether the hard " c " shall be used, and whether " J " shall be pronounced like " y " (consonant). As a matter of fact, the former two have been more a matter of national pronunciation. The differences do not at all affect the pronouncability of words. The *Encylopedia Brittanica* (last edition) reads : " The Pronunciation of Latin in Italy in the classical period has been determined with approximate accuracy by strict application of the Philological method ".

From these considerations I am led to the conclusion that the easiest test as to whether a barbarous word has been Latinized or treated as a Latin word is whether it is pronouncable in Latin. From a practical standpoint, I think that any word that could be accepted as pronouncable in English, French, German, Italian or Spanish would pass as pronouncable in Latin (though perhaps with a very different pronunciation in that language) because all these languages have the same rules in regard to syllables, which determine the possibility of pronunciation. " Srb " cannot be pronounced in any of these languages ; " serbi " can be in all, and would be given the pronunciation that " srbi " would have in its original tongue.

Even though the fact that " srbi " does not comply with the Revised Draft, Article 27, Section 1 (that names must be Latinized), we are met with the conflicting mandatory provision of the Revised Draft, Article 28, Section 16(b) (taken from *Bull. zool. Nomencl.* **4** : 205, paragraph 11, paragraph (1)(b)(i), that the ending " i " or " ii " shall be added to the exact unchanged surname.

From these considerations I am led to propose the enclosed proposals.[1]

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[1] The proposals here referred to are reproduced as Document 49/5.

DOCUMENT 49/5

Latinization of certain geographic and personal names

By **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Statement received on 3rd April 1958)

Some names in such languages as Welsh, Polish, Hungarian and Czech, although written with the Latin alphabet, are not pronouncable as Latin words and cannot be regarded as Latinized without modifying the spelling. " Cwmffrwd ", " Srb ", and " Przemysl " are examples.

2. One requirement of the *Règles* is that a zoological name must be Latin or Latinized, or treated as such, if it is of barbarous origin. Conflicting with this is the rule that a zoological name based on a modern surname shall consist of a certain ending " added to the exact unchanged surname ".

3. As long as these two rules stand unmodified, it is impossible to base a specific name upon such a surname as " Srb ".

4. The pronunciation of zoological names is a matter that has never entered into the *Règles*, and need not do so. Of the three methods of pronouncing Latin in use, two are based on national convenience. The differences lie largely in the values given to certain vowels. But the pronunciation used in Rome in classical times has been determined with approximate accuracy. Without any regard to these differences, a word that cannot be pronounced in one method cannot be pronounced by any of them. It follows that whether such a word as " Cwmffrwd " can be pronounced in Latin, by whatever method, is the easiest test as to whether it can be regarded as " Latinized ".

5. I doubt that any zoologist would advocate that every Latinized barbarous name must as closely represent phonetically the original pronunciation as the Latin alphabet permits. No one would suggest that the French " Renaud " should be Latinized (by the Roman method of pronunciation) as " Reno ", and indeed to do so would at once require selection of a particular method of pronouncing Latin. I would not suggest that the Welsh " f " must necessarily be Latinized as " v " because that is its phonetic value. But it does seem rational that where a combination of consonants that is impossible in Latin

occurs in a barbarous word, it should be Latinized in such a manner as to retain the approximate phonetic value of the original word. Thus the Welsh " Cwnffrwd ", which has the Latin phonetic value of " cumfrud ", should be so Latinized. The Polish " cz ", a combination of consonants unknown in Latin, like Czečh " **c** " (c with a háček) is pronounced like the soft English " ch " in " cheese ", a sound not used by the Romans but possible in the " English " pronunciation of Latin. Probably " ch " is the best Latinization of these.

6. When the tables are completed that are to indicate how letters bearing diacritic marks in the several languages are to be Latinized, they will help in the Latinization of many of these cases. But they will not be sufficient. Just as we have for Greek, and have under consideration for the Cyrillic languages, we need tables for the Latinization of combination of consonants peculiar to other languages.

7. The language of the Zulus and other African tongues frequently initiate a word with an " m " followed by a consonant. " Mposensis " from " Mposa " cannot be regarded as a Latinized name, but I shall leave it to others to suggest what should be done.

8. The suggested additions to the Revised English draft of the *Règles* that follow are designed to obviate the conflict to which attention has been called in the second paragraph of this paper.

Article 27(b)

P. 192, Line 6. *Add* :

" sh ", " sht ", " pjh " and initial " ll " *
may be used in Latinizing geographic and personal names.

P. 192, Line 9. *Add* :

(c) **Barbarous geographic or personal names.**—A barbarous geographic or personal name that lacks such relation of vowels and consonants as permits it to be divided into syllables capable of pronunciation in Latin** must be Latinized in order to be used as the basis of a Neolatin zoological name.

Examples : A specific name based on the Welsh geographic name " Cwmffrwd " should be written " cumfrudensis ". A species dedicated to a man bearing the Czech surname " Srb " should be named " *serbi* ". The

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* Or would it be better to reduce the initial " ll " in such names as Lloyd to a single " l " ? Here not only the Welsh " ll " is concerned, but also the Spanish ella.

** This is without reference to any particular method of pronouncing Latin.

Polish city Przemysl may be Latinized phonetically as "*Pjhemysl*". The combination "cz" which occurs in certain East-European languages, and also the Czech "č" should be Latinized as "ch". The Polish combination "szcz" should become "sht".

9. In such cases where a change is necessary, an attempt should be made to express in Neolatin the phonetic values of the original word. If a geographic place had formerly a Latin name, that should be employed, as Bruna for Brnno, and if a name that cannot be pronounced in Latin in its vernacular spelling has an equivalent in the Germanic, English, or one of the Romance languages, such an equivalent is preferable. Thus the German Lublin could be used instead of the Polish Lwow.

(d) **Contraventions.**—Geographical and personal names introduced as zoological names in contravention to the provisions of paragraph "c" preceding shall be corrected, but shall be attributed to their original author and date.

Article 28, Section 13

Page 220, Line 7. *Add*:
(*cf.* Article 27, Section (2)(c)).

Article 28, Section 16

Page 223, Line 20. *Add*:
(For an exception *cf.* Article 27, Section (2)(c)).

Page 226, Line 3. *Add*:
(For an exception *cf.* Article 27, Section (2)(c)).

Article 28, Section 17

Page 228, Line 18. After "otherwise" *add*:
(For an exception *cf.* Article 27, Section (2)(c)).

DOCUMENT 49/6

Comments on J. Chester Bradley's paper on the Latinization of certain geographic and personal names (Document 49/5)

By **L. W. GRENSTED**

(*Consulting Classical Adviser to the International Commission on Zoological Nomenclature*)

(Letter dated 1st April 1958)

I have had from Professor Chester Bradley a copy of a paper which I understand he has sent to you in connection with the Latinising of names such as " Cwmffrwd ", " Srb ", and " Przemysl " (which I remember well as Primrose Hill !). He asks me to let you have my views on it in detail.

My immediate and natural reaction is that such names should where possible be avoided. Beyond that, I think that what he suggests is substantially all right—though I rather believe that " Cwmffrwd " would be pronounced differently in North and South Wales, even though " Cumfrud " is the best one could do with it. I do not see how consistency is possible. In particular I think that the Welsh " ll ", initial or medial, is too well established to be changed. *Lloydia* is well-known, and clear enough. And nothing can be done to reproduce the true sound of the " ll " in, say, Dolgelley—which is nothing like the " Dolgethly " of well-meaning English visitors. And I doubt whether " Pjhemysl " is better Latin than " Przemysl ".

I feel rather inclined to let the suggestions go through, hoping that authors of new names (and we shall soon have Chinese Zoologists in the field) will be merciful.

But I do feel some doubt about the section on Contraventions (paragraph 9(d)). If an author's name is a good attempt at producing a pronounceable word I think we ought to be a bit cautious about correcting him—especially if he knows his own language and we do not. I can conceive well-meaning corrections in some languages producing very unexpected changes of meaning.

As a non-zoological example, it does not at all do to pronounce " Karma " in the English way as " Kama ", and to write it so would be worse—much worse !

I note, in Bradley's paper, one or two slips :
Paragraph 5 line 11 read " Cwmffrwd "
Paragraph 9 line 4 read " as Bruna for Brno, . . . "

There might be something to be said for allowing geographical names to stand as they are printed in standard English or French atlases, i.e. as interpreted in one of the two languages recognised in the discussion and drafting of the " Rules ".

DOCUMENT 49/7

Specific Names based on the Surname of a Person, prefixed by one or more of his Forename Initials, with a proposal for dealing with the situation so arising

By **L. R. COX**

(*British Museum* (*Natural History*), *London*)

(Letter dated 7th April 1958)

C. A. Fleming, of the New Zealand Geological Survey, has written suggesting that I should raise the above question at the Colloquium, and mentioned his letter to me of 20th March, a copy of which he has sent to you direct[1]. The question involved is as follows.

When it has been desired to dedicate a species to an owner of a surname common to more than one worker in the same field, the course has occasionally been adopted of proposing a compound specific name, the first component of which is the initial of the forename of the person to whom the species is dedicated. Examples known to me, besides the case mentioned by Fleming, are *Pinna g. muelleri* Krenkel and *Coralliochama g. boehmi* Muelleried. There are probably cases in which two or more initials have been so employed, but I can think of none at the present moment. The treatment of such names does not appear to be covered by any existing *Opinion* or *Decision*, nor is this particular matter mentioned in the Bradley Draft of the International Rules which you have circulated. In this Draft, however, are two clauses which might be considered to have some bearing on the point.

Under Article 28, Section 13, of the Bradley Draft reference is made (p. 221, line 21) to specific names consisting of a " phonetic reproduction of the initials of one or more persons " (what " phonetic reproduction " means, I do not know), which are to be regarded as an arbitrary combination of letters ; and under Article 28, Section 15 (p. 222) it is stated that (except in one circumstance) " the elements of a compound name shall be coalesced, not hyphened ". It might, therefore, be maintained that the specific name proposed as " *G. Muelleri* " should become the single word " *gmuelleri* " and regarded as an arbitrary combination of letters. In my view, however, this type of case should be made a second exception to the coalescence of the elements of a compound name, so that the specific name I have mentioned should be rendered as " *g-muelleri* ", omitting the full-stop after the " g ". At the same time, I think that the introduction of such specific names in the future should be prohibited.

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[1] In the letter in question, Dr. Fleming mentioned the present issue but did not discuss it.

This, however, brings me to a second matter.

Names consisting of Arbitrary Combinations of Letters should be required to be Pronounceable

In the Rules as they stand (Articles 27 and 28 of the Bradley Draft) no qualifications at all seem to be required of arbitrary combinations of letters which may be treated as equivalent to Latin words and used as generic or specific names. So far as I can see, such a combination as *QSBTRUS* could be accepted as a specific name unless the Draft Rules are modified.

I would, therefore, propose that Article 27, Section 1(a) of the Bradley Draft should be emended to read : "**Arbitrary words.**—An arbitrary combination of letters, treated as though it were a Latinised word, and provided that it is capable of pronunciation when so treated, shall be deemed to come under the preceding Rule ", and that the corresponding clause relating to specific names should be similarly modified. Possibly some Slavonic gentlemen would be capable of pronouncing even the hypothetical specific name I have just mentioned, but that is another matter—a name formed of an arbitrary combination of letters should be one which a Roman could have pronounced.

DOCUMENT 1/66

(*continued from page* 851)

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "

(Commission Reference : Z.N.(S.) 1056)

By **ROBERT O. FAY**

(*Oklahoma Geological Survey, Norman, Oklahoma, U.S.A.*)

(Letter dated 14th April 1958)

In reply to an article sent to me : " Proposed insertion in the *Règles* of provisions recognizing Parataxa as a special category for the classification and nomenclature of discrete fragments or of life-stages of animals which are inadequate for identification of whole-animal taxa, with proposals of procedure for the nomenclature of Parataxa " by Raymond C. Moore and P. C. Sylvester-Bradley, I wish to emphasize several points.

First, we are not certain of the biological relationships, morphological position, or physiology of conodonts. For instance, it is believed that there are two suborders of conodonts (1) Neurodontiformes (fibrous type) and (2) Conodontiformes (Lamellar type). Some authors now wish to exclude the first from the conodonts, whereas most authors do not. This is a matter of individual opinion, open to question, subject to controversy, and not legally settled by the *Règles*. It is not known, for instance, that the conodonts are vertebrates or invertebrates, clearly a subject that should be divorced from the *Règles*. However, the proposals cited in the above article indirectly make the above decision, namely that Neurodontiformes are not conodonts and Conodontiformes are conodonts, treating the former as Taxa and the latter as Parataxa for discrete parts and Taxa for assemblages. This is not seen directly in the *Règles* as proposed, but that is what has to happen as a result of the above article.

Second, the assemblages, upon which the entire article is based, are open to question. Some authors who have seen assemblages (Branson & Mehl, C. C. Branson) are not convinced that these represent whole-animal taxa but are coprolitic in nature, suggesting that several animals represented by conodonts were swallowed by a fish or some animal and later excreted. Therefore the names used for assemblages should be disregarded and the names used for discrete units should be considered as valid under the present rules (Taxa). However, this is an opposite view from that expressed in the proposal, based upon a different interpretation of assemblages.

Third, the conodont *Archeognathus primus* Cullison, 1938 shows clearly that each individual conodont attached to a jaw or ramus is the same, and therefore any name applied to a discrete unit is Taxic. In order that this would not apply to the conodonts, it is necessary to exclude the suborder (Taxa) Neurodontiformes from the suborder (Parataxa) Conodontiformes (except for natural assemblages !) accepting the fact that *Archeognatus* belongs to the Neurodontiformes.

Although we must operate outside of the rules occasionally, I deem it not only desirable but advisable in the case of the conodonts because of the above reasons. Also, there has been no confusion or disagreement among conodont specialists with regard to assemblages. It is my hope that we will have a few simple rules to cover this exceptional case because certainly we cannot place conodonts under the same rules as aptychi (structures that are biologically, morphologically, and physiologically understood).

DOCUMENT 1/67

Comment on the Moore/Sylvester-Bradley " Parataxa Plan "

(Commission Reference : Z.N.(S.) 1056)

By **KOSARAJU REDDIAH**

(*Marine Biological Station, Port Erin, Isle of Man*)

(Letter dated 21st April 1958)

I write to convey to you that I agree in principle with the proposed " Parataxa Plan " tabled by R. C. Moore and P. C. Sylvester-Bradley in so far as it applies to paleontology provided the method of application of the system is acceptable to the specialists in the field. I consider the plan to be of practical advantage to the paleontologists and the risk to nomenclatural stability to be small.

Although I do not possess any practical experience in paleontology it appears to me however that the issue would be simplified if some convenient method is found so as to apply both the Law of Priority and the Law of Homonymy to act independently when a wall has to be instituted between the two systems of taxa, instead of the Law of Priority only, the difficulties for which have already been expressed by you as the Secretary to the International Commission and to some extent by the proposers themselves (1957, *Bull. zool. Nomencl.* **15** : 107–117) or that it should be clearly defined by the Commission when recognised what the wall is composed of.

Secondly, I personally feel that this may not be the right time and even the right method for the plan to extend to the " Life Stages " of the living animals and I enumerate below the points that have made me to arrive at this conclusion :

(1) The concept of the word " fragments " or " parts " as applied to fossil organisms is not the same as the life stages of living animals. The life stages are not the fragments or parts of life stages but are stages that are complete in form based on a more definite pattern of expression than the fragments or parts of fossil forms, by reason of

which the life stages show pronounced systematic affinities to higher taxa and to a less degree if not at all, to lower taxa until the time the complete life history of the animal is worked out. It is no wonder that the Chairman of the American Society of Parasitologists, Allen McIntosh, has confidently clarified in his letter dated 19th December 1956 to J. Chester Bradley (*ibid.* : 98) that all the species belonging to collective groups can be placed in classes, most of them in orders and many in families.

(2) In a determined effort to work out the complete life-history of a living animal, the matter does lie within the scope of practical possibility, whereas it may not be even feasible in the case of fossil organisms as it is largely dependent on chance as to what type of the organism, or type of the part of the organism, or to what extent it was fossilised, and as to whether the worker has sought the right material and at a right place in a right formation. Hence, I fully appreciate the need felt by many paleontologists and warmly sympathise with them for the recognition of " Parataxa Plan " to the fossil groups.

(3) Assuming that when the parataxonomic system is adopted and proved effective for selected groups of living animals also, it will not be practical to restrict the system which would particularly benefit special fields like the medical but it will have to be extended to all fields of study comprising different forms of animal associations with complicated life-histories irrespective of pure and applied fields, thus spreading to a fairly large part of the animal kingdom which, I am afraid, might result in further chains of confusion and instability.

(4) After having studied the resolution called for by the American Society of Parasitologists (1957, *ibid.* : 89) and the supplementary proposal introduced by J. Chester Bradley (1958, *ibid.* **15** : 242–244) satisfying the further requirements of the said resolution for the purpose of assigning taxonomic status for the collective groups, I still feel that the time is not ripe yet to give any significant systematic lift to such groups. The matter still requires to be canvassed for opinions and comments not only among the systematic parasitologists but also to all other animal systematists as far as possible, even if it would cover another five years, as the weight representing the views of neontologists now seems to be comparatively small and the need also appears to be not immediate.

Without going any further, I should like to conclude by saying that the recognition of the " Parataxa Plan " to fossil groups alone at this stage would prove itself as one of the most remarkable advances ever made in the history of zoological nomenclature.

DOCUMENT 1/68

THE DEFINITION OF THE TERM " PARATAXON "

(Commission Reference : Z.N.(S.) 1056)

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Enclosure to letter dated 29th April 1958)

A definition of the term " parataxon " was included in the original proposals concerning parataxa (Document 1/1, p. 13). I have been asked to suggest a modification of this definition which would, without relaxing any of the safeguards introduced to prevent abuse, render it sufficiently comprehensive to cover the wider applications which have been suggested by some authors, such as the inclusion, as parataxa, of certain works of animals (e.g., trails ; faecal pellets).

2. I would emphasise that such a change in definition is not intended to pre-judge the issue of whether some or all works of animals are to be classified in terms of parataxa. In my view, most works of animals would be better classified as natural animals, or as Organ Genera. I must also explain that shortage of time has made it impracticable to discuss the definition given in the following paragraph with Dr. R. C. Moore, senior author of the original proposals.

3. The definition I would suggest is based on that given in a previous document (Document 1/64, paragraph 3), and is intended to replace proposal (2)(a) of paragraph 13 of Document 1/1 :

> [that a new article should be incorporated (a) defining the expression " parataxa " in the following terms :]
>
> > " parataxa are artificial taxa, based on material deemed, by decision of the Commission, to be inadequate for diagnosis of natural taxa, and classified on arbitrary morphological grounds, without regard to relationships ".

4. In order to avoid unintended restriction of the original proposals, the term " fragments " in the second line of proposal (2)(b)(i), and also in the second line of (2)(b)(ii), should be replaced by the term " remains ".

DOCUMENT 9/3

(*continued from page* 209)

Citation of corrected and emended names

(Commission Reference : Z.N.(S.) 1269)

By **CYRIL F. DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Letter dated 22nd March 1958)

Case No. 9 involves a problem that has confronted me a number of times in the preparation of a check list of Nearctic Rhopalocera.

To cite some simple examples only, when used as a scientific name the name McDunnough has been written incorrectly because of the omission by all authors save one of an " a " as the rules now require. It has accordingly been changed in my List to *macdunnoughi* followed by the author, year, and emendation in parentheses.

Similarly, *Callophrys sheridanii* (Carpenter), 1877, named after Lt.-Gen. P. H. Sheridan, has been written incorrectly with an " o " instead of an " a ". In such cases, because of a possible misunderstanding in correcting the misspelling, my entry reads as follows :

> sheridanii (*Carpenter*), 1877 (emendation)
>
> *sheridonii* (Carpenter), 1877 (*lapsus calami*).

It was, therefore, with particular interest that I read Case No. 9 and the observations of Professor Bradley and yourself. This situation may need clarification. It is my suggestion that all emendations should be noted as such. In some cases, such as *macdunnoughi*, it may not be necessary to place *mcdunnoughi* in the synonymy. If the former name is followed by the word emendation or something similar, it is quite obvious what has been done. But in cases like *sheridanii* an explanation should follow and the incorrect spelling placed in the synonymy followed by *lapsus calami*. Perhaps to avoid too many exceptions in the *Règles*, the latter procedure should be followed in all cases, and that is the action hereby recommended.

DOCUMENT 17/4

(*continued from page* 692)

Citation of dates in round brackets for bibliographical references

(Commission Reference : Z.N.(S.) 1294)

By **CYRIL F. DOS PASSOS**

(*Mendham, New Jersey, U.S.A.*)

(Letter dated 22nd March 1958)

This case has been studied and my opposition to the proposed deletion of Article 22, Recommendation 10 (β) relating to the citation of dates in a particular situation is expressed hereby.

The decisions taken at Paris on this subject are concise and logical. They give one, who becomes familiar with them, an instant knowledge of where to find a citation. They are by no means restrictive or pedantic, and correspond with the usual practice. They will not be ignored by most zoologists once they are thoroughly understood and their advantages appreciated.

DOCUMENT 26/15

(*continued from page* 618)

International Systems for the transliteration of Cyrillic characters and their modification for use in Zoological Nomenclature

(Commission Reference : Z.N.(S.) 310)

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield, Sheffield, England*)

(Enclosure to letters date 26th April 1958)

The Almasov-Boltovskoy plan was first published (January, 1955) a few months before the first edition of the new " *International System for the Transliteration of Cyrillic Characters* " was issued by the International Organization for Standardization (I.S.O.), in October, 1955. It would, in my view, be a mistake for the International Congress to adopt a system which ignored the advances made towards international agreement by our bibliographic colleagues. The present contribution to the discussion is an attempt to set out a scheme which will harvest the skill and labour expended by Almasov and Boltovskoy while conforming (so far as the special requirements of zoological nomenclature allow) with the I.S.O. Recommendation.

2. The various schemes of transliteration which have been propounded in the past chiefly vary in the extent to which diacritic marks are used. There is considerable variation even within the various national schemes that are now being proposed—a great many more diacritic marks being recommended, for example, in the scheme as set out by the Royal Society (Document 26/12) for the transliteration of Bulgarian than in that for Russian. The advantage of diacritic marks over polygraphs is the possibility of avoiding all ambiguity in back-transliteration. But diacritic marks, as Almasov and Boltovskoy have pointed out, are not to be permitted in zoological names, and, if nevertheless proposed, are to be subject to " automatic " correction according to a schedule to be attached to the Code. Almasov and Boltovskoy have therefore attempted to use polygraphs in such a way as to avoid ambiguity in back-transliteration. Bushell (Document 26/10) rightly points out, however, that such absence of confusion has been achieved only for those who have some knowledge of the

Slav languages concerned. But Bushell also contends that zoological nomenclature, as such, has no need of back-transliteration, and that consequently the Almasov-Boltovskoy scheme is more complicated than necessary. Bushell therefore suggests that two quite different systems are needed, one for bibliographical purposes, one for zoological nomenclature. Bushell's clear exposition of the problem seems quite fundamental to our present purpose, and deserves further analysis.

3. Once an approved schedule of transliteration has been added to the Code, names based on words in languages employing Cyrillic characters will enter zoological nomenclature in four ways :

(a) names will be transliterated according to the schedule ;

(b) names will be transliterated according to some scheme that is not that of the schedule, but which does not involve the use of diacritic marks ;

(c) names will be transliterated according to some scheme that is not that of the schedule, and which does include diacritic marks ;

(d) names will first be transliterated according to some scheme that employs diacritic marks, but before publication as zoological names, these diacritic marks will be eliminated by application of either the approved schedule of substitutes, or by some other method of substitution.

Names transliterated according to (a) will be linguistically correct, and available without modification. Likewise, if the principles approved at Copenhagen are endorsed, names transliterated according to (b), even though not in the form recommended, will not be subject to subsequent emendation. But names introduced according to scheme (c) will be automatically subject to correction by application of the approved schedule of substitutes for diacritic marks, so that, in fact, they come to equal names transliterated according to scheme (d).

4. It will clearly be to the advantage of zoological nomenclature if there is as little disagreement as possible between the finally accepted zoological names based on words transliterated according to the four methods set out in the preceding paragraph. It must be emphasised that the majority of names based on words in Cyrillic characters will be coined by zoologists who are natives of countries using such languages. Hence, if disagreement between methods (a) and (b) is to be avoided, it is more important for the schedule to be acceptable to persons of (for example) Russian, Bulgarian or Serbian nationality than it is to those of, say, British, French, American or German nationality. In this connection it is particularly encouraging to note (from the Annexe to Document 26/8) that the Institute on Linguistics in Moscow strongly supports the scheme being sponsored by I.S.O. Clearly the International Congress must pay particular attention to this scheme. Now, the I.S.O. scheme uses diacritic marks freely, so if it were to be recommended for use in the Code, it would have to be accompanied by a schedule of recommended substitutes for diacritic marks. This emphasises another important point, which is to ensure that names transliterated according to scheme (a) of paragraph 3 should agree as far as possible with those transliterated according to scheme (d). It seems imperative, therefore, to formulate proposals for the schedules of diacritic marks at the same time as those for the schedules of transliterations. Now, if the Almasov-Boltovskoy proposals are compared with those of the I.S.O., it will be found that (with a few exceptions dealt with in detail in the following paragraphs) the only points of disagreement are those in which the I.S.O. scheme uses diacritic marks. One possible course for the Congress would therefore be (a) to recommend (or, perhaps, to stipulate) that transliteration should follow the scheme sponsored by I.S.O., modified by the substitution of letters specified in a schedule for those characters embodying diacritic marks ; and (b) to base this schedule of diacritic marks on the scheme proposed by Almasov and Boltovskoy. Such a course seems to have much to recommend it, but it is necessary also to explore the possibility, suggested by Bushell (Document 26/10), of adopting a much simplified schedule of substitution, in which such letters as *y* are allowed to represent a variety of different sounds. At first sight Bushell's scheme sounds attractive, but it would have one severe disadvantage. As it would certainly rank as a unique system of transliteration, it could not be hoped that any agreement would exist between names formed according to the systems (a) and (b) outlined above in paragraph 3. This disadvantage appears to me to be so great as to rule out further consideration of this proposal of Bushell, although I agree with his contention that there is little need to consider back-transliteration when coining zoological names.

5. It is now necessary to consider the details of the Almasov-Boltovskoy proposals. The great majority of these have been chosen with such skill that they have already a great body of international opinion backing their acceptance. But there are a few exceptions :

(a) Character No. 8b (as listed in the I.S.O. scheme set out in Annexe 2 below) has never previously, so far as I know, been transliterated as *ew* but (in the absence of diacritic marks) either as *jo*, *yo* or *o* (*cf.* Documents 26/3, 4, 6, 8 annexe, 9 and 12 Table III).

(b) Character No. 38 is used so differently in Russian and Bulgarian that surely it is a mistake to attempt the same transliteration in both languages. *W*, in any case, seems unsuitable to both. In the I.S.O. system the Russian character is represented by a double oblique dash (″), which might either be omitted altogether in zoological names, or represented (as suggested by the Institute of Linguistics, Document 26/8, p. 594) by the letter *j*. In Bulgarian the I.S.O. system recommends *ă*. This surely must be transliterated as a vowel ; a substitute for the diacritic mark could be either *a* or *ah*.

(c) Character 40, an apostrophe or oblique dash according to both the I.S.O. system and that of Almasov and Boltovskoy, seems unsuitable for inclusion in any zoological name, and would, in my view, be better simply omitted.

(d) There remain five characters which are translitered in the I.S.O. scheme in a way different to that advocated by Almasov and Boltovskoy, although no diacritic marks are involved.

Character No. (as in Annexe 2)	Transliteration	
	Almasov-Boltovskoy	I.S.O.
9	jeh	je
13b	i	y
14	ih	i
32	kh	h
33	th	c

In these cases, some of the suggestions put forward by Almasov and Boltovskoy have previously been rather frequently used in Anglo-American and west European systems of transliteration, and consequently may seem to some people more familiar than the alternatives recommended by I.S.O. In my view, however, the fact that the I.S.O. scheme is likely to find greater favour in Slav countries is more important than that it should be familiar in the languages of western Europe, and I therefore propose that the I.S.O. alternatives should, in these five cases, be those recommended in the Code. They have also the advantage of being simpler.

6. It is now possible to draw up two schedules according to the principles set out in the preceding paragraphs. Schedule 1 (Annexe I) lists the letters and combination of letters which I suggest that the Congress should :

(a) stipulate as those to be substituted for diacritic marks when these have been incorrectly included in zoological names based on words transliterated from the following languages : Bulgarian, Russian, Ukrainian, White Russian and Serbian ; and

(b) recommend as those which should be substituted for diacritic marks when basing a new zoological name on a word in one of the foregoing languages transliterated according to the I.S.O. system (given in Schedule 2).

Schedule 1 incorporates all the recommendations of the Almasov-Boltovskoy scheme except for those noted in para. 5.

Schedule 2 (Annexe II) lists the I.S.O. scheme as published in I.S.O. Recommendation No. 9 (1st edition, October, 1955), together with the recommended substitutes for diacritic marks, as in Schedule 1. As I am myself no authority on these matters, I have queried the disputed symbols listed above in paragraph 5, and suggest that these need further discussion, and expert advice.

7. The I.S.O. Recommendation of Schedule 2 is copyright, and is reproduced here by permission of the British Standards Institution. The B.S.I. have in preparation a new British Standard on the " Transliteration of Cyrillic and Greek Characters ", due to be published in June, 1958. This Standard will be divided into three sections. Section 1 is intended as a British rather than an international system, and although it will certainly appeal to English-speaking scientists, it is in my view not suitable for international use in zoological nomenclature for the reason that it is more important to choose a scheme preferred by a native of one of the countries using Cyrillic characters (who will inevitably include the majority of zoologists wishing to coin zoological names based on words transliterated from Cyrillic) than it is to appeal to English-speaking zoologists.

Section 2 is to include four tables for an international system of transliteration. It will incorporate all the recommendations of the I.S.O. scheme, and will in addition provide tables for the transliteration of Cyrillic Macedonian, Moldavian, Church Slavonic and Roumanian. Section 3 provides a table for Greek transliteration.

If the Congress looks with favour upon the scheme proposed in para. 6 above for the modification (by the substitution of diacritical marks) of the international systems for Bulgarian, Russian, Ukrainian, White Russian and Serbian, it may well wish to extend the same principles to cover the Macedonian, Moldavian and Roumanian Cyrillic alphabets as set out in Section 2 of the British Standard. This section, it must be emphasised, is to be proposed as international, rather than regional, in scope.

I would like to express my appreciation to the British Standards Institution for their courtesy in providing information, incorporated in this paragraph, in advance of the publication of the Standard in question.

ANNEXE 1

DRAFT OF PROPOSED SCHEDULE 1

Proposed schedule of substitutes for diacritic marks employed in the transliteration of Cyrillic characters when these are to be incorporated in zoological names

Diacritical mark	Languages from which transliterated[1]	Proposed substitute in zoological names
ă	B	*ah?*[2]
č	BRUWS	*ch*
ć	S	*chj*
đ	S	*dj*
ë	RW	*jo?*[3]
ě	BRUW	*je*
e̊	RW	*eh*
ġ	UW	*gh*
š	BRUWS	*sh*
ž	BRUWS	*zh*
″	RUW	omit?[3]
′	BRUW	omit?[4]

[1] B=Bulgarian; R=Russian; U=Ukrainian; W=White Russian; S=Serbian.

[2] See para. 5a.

[3] See para. 5b.

[4] See para. 5c.

DRAFT O

The I.S.O. scheme for the transliteration of Cyrillic characte
with (in brackets) substitutes for diacrit

Number	Cyrillic character	Language	Recommended transliteration
1	А а	BRUWS	*a*
2	Б б	BRUWS	*b*
3	В в	BRUWS	*v*
4	Г г	BRUWS	*g*
5	Ґ ґ	UW	*ġ (gh)*
6	Д д	BRUWS	*d*
7	Ђ ђ	S	*đ (dj)*
8a	Е е	BRUWS	*e*
8b	Ё ё	RW	*ë (jo?)*
9	Є є	U	*je*
10	Ж ж	BRUWS	*ž (zh)*
11	З з	BRUWS	*z*
13a	И и	BRW	*i*
13b		U	*y*
14	І і	BRUWS	*i*
15	Ї ї	U	*ji*
16	Ј ј	S	*j*
17	Й й	BRUW	*j*
18	К к	BRUWS	*k*
19	Л л	BRUWS	*l*
20	Љ љ	S	*lj*
21	М м	BRUWS	*m*
22	Н н	BRUWS	*n*
23	Њ њ	S	*nj*

SCHEDULE 2

an, Russian, Ukrainian, White Russian and Serbian languages,
l for recommendation in the Zoological Code

Number	Cyrillic Character	Language	Recommended transliteration
24	О о	BRUWS	*o*
25	П п	BRUWS	*p*
26	Р р	BRUWS	*r*
27	С с	BRUWS	*s*
28	Т т	BRUWS	*t*
29	Ћ ћ	S	*ć (chj)*
30	У у	BRUWS	*u*
31	Ф ф	BRUWS	*f*
32	Х х	BRUWS	*h*
33	Ц ц	BRUWS	*c*
34	Ч ч	BRUWS	*č (ch)*
35	Џ џ	S	*dž (dzh)*
36	Ш ш	BRUWS	*š (sh)*
37a	Щ щ	B	*št (sht)*
37b		RU	*šč (shch)*
38a	Ъ ъ	B	*ă (ah?)*
38b		RUW	″ (omit?)
39	Ы ы	BRW	*y*
40	Ь ь	BRUW	′ (omit?)
41	Ѣ ѣ	BRUW	*ě (je)*
42	Э э	RW	*e̊ (eh)*
43	Ю ю	BRUW	*ju*
44	Я я	BRUW	*ja*

DOCUMENT 33/7

(*continued from page* 930)

Draft " Règles " : minor drafting amendments

(Commission Reference : Z.N.(S.) 1329)

By **P. BASILEWSKY**

(*Musée Royal du Congo Belge, Tervuren, Belg.*)

(Enclosure to letter dated 20th February 1958)

Point (1)

Article 10, Section 1, Recommendation 21 (: 83)

L'indication de l'institution où se trouve déposé le matériel typique d'une forme nouvellement décrite devrair être obligatoire et non une simple recommandation.

Point (2)

Article 11 (: 88)

Il serait nécessaire de notifier qu'une erreur de transposition en latin, ou l'emploi d'une voyelle jointive mal appropriée dans la formation d'un mot composé, ne constituent pas une orthographe originale invalide et ne peuvent, par conséquent, être sujets à émendation, même si l'étymologie du nouveau nom est clairement indiquée.

Point (3)

Article 19, Section 1(a) (: 120)

Le terme " génotype " est définitivement condamné et c'est très regrettable. La raison de cette condamnation, à savoir une confusion possible avec le même terme utilisé en Génétique, est inconsistante puisqu'il s'agit de disciplines aussi différentes.

Le choix du terme " Type-species " est malheureux, car il devra être traduit dans toutes les langues, ce qui amènera un manque d'uniformité facheux. Le terme " genotype " avait l'avantage de pouvoir être utilisé dans toutes les langues sans traduction.

J'insiste pour que cette question soit remise à l'étude. Pourquoi avoir tranché aisi " ex cathedra " ? Voilà pourtant un cas pour lequel il aurait été utile de connaître les avis du plus grand nombre possible de taxonomistes, par l'envoi d'un questionnaire. Est-il trop tard ?

Point (4)

Article 19, Section 4(e) (: 129)

Une prévision stipule qu'un nom générique établi avant 1931 et pour lequel aucune espèce n'a été citée comme s'y rapportant, sera supposé contenir comme espèces originalement citées celles énumérées par le premier auteur subséquent.

Il est cependant nécessaire d'ajouter que ces espèces ne peuvant être postérieures en date à celle de l'établissement du genre.

Point (5)

Article 20 (: 138)

Dans cet article ne sont mentionnés que les " types primaires " : holotype, syntype, lectotype et neotype.

Il est regrettable que les termes de " paratype " et " allotype " ne soient pas reconnues. Cela ne les empecherait pas de rester des types secondaires et subjectifs, n'ayant jamais la valeur de " name bearer ", mais il serait fort utile de les inclure dans le Code, ne fut-ce que justement pour bien marquer cette différence.

Ces deux termes sont utilisés par tous les taxonomistes ; ils existent et ne pas les reconnaître c'est fermer les yeux sur un fait bien établi.

Point (6)

Article 20, Section 1, Recommendation 4 (: 139)

" Every institution in which types are deposited should : (γ) make them available to research scientists for study "

Cette indication est beaucoup trop vague. Certaines institutions la comprennent simplement comme une non-interdiction à un spécialiste de venir examiner ces spécimens sur place. Ce n'est qu'une façon de tourner la recommandation.

Il serait souhaitable que chaque institution possédant des types soit mise dans l'obligation de communiquer ces types à des institutions reconnues, tout en s'entourant de toutes les précautions nécessaires quant à la sécurité de cette communication.

Point (7)

Article 20, Section 2 (: 141)

Bien souvent la description originale d'une forme nouvelle fait seulement mention de plusieurs exemplaires, sans désignation d'holotype, tandis qu'en réalité un de ces exemplaires est etiqueté holotype par son auteur. Dans ce cas il n'est pas nécessaire de céer un lectotype, l'holotype existant.

Point (8)

Article 20, Section 5(a)(x)(: 147)

La publication d'un neotype dans le *Bulletin* est-elle bien nécessaire ? La publication de la création de ce neotype dans le travail de l'auteur n'est-elle pas suffisante ?

Point (9)

Article 24, Section 11(c) (: 180) (et Article 25, Section 1 (: 188))

La prévision telle qu'elle est établie est absolument inacceptable.

J'illustre ma protestation par un exemple réel.

Le genre A est établi en 1810. Le nombre d'espèces lui attribuées croit sans cesse et atteint 300 vers 1900 ; plusieurs sous-genres sont établis et même des genres pour les espèces les plus particulières. Entre 1940 et 1955 paraissent, sous la signature de plusieurs spécialistes, d'importants travaux qui prouvent que ce genre A comporte en réalité les genres A, B, C, . . . V, et constitue une importante sous-famille avec une dizaine de tribus.

En 1957, un auteur sans aucune compétence spéciale dans le groupe, déclare estimer que les genres A, B, C, . . . V n'ont aucune valeur et que seul le genre A compte ; et cela sans même aucun essai de discussion taxonomique. Comme plusieurs de ces genres comportent des noms spécifiques identifiques (mais, ayant été décrits dans des genres distincts, n'ont jemais eu la même combinaison binominale), il les considère comme des homonymes secondaires et crée des noms de remplacement nouveaux.

Il va sans dire que la proposition de ce dernier auteur de réunir en un seul les genres A, B, C, . . . V est un retour en arrière et qu'elle ne peut être acceptée taxonomiquement et ne sera naturellement suivie par personne. Il n'empêche qu'à cause de son action plusieurs noms spécifiques identiques ont été introduits dans un même genre ; ils ont donc été des homonymes secondaires.

Appliquer à un tel cas la " permanency of rejection " est non seulement une absurdité mais aussi un encouragement à une action arbitraire et scientifiquement malhonnête.

Recourir à la Commission et attendre sa décision c'est accorder trop d'honneur à une action aussi incorrecte, et rester dans l'indécision. La Section 16 de l'Article 24 prévoit d'ailleurs des abus de ce genre, mais ne propose pas de moyen pratique pour les éliminer.

Il ne reste donc qu'une solution ; modifier la prévision dans le sens suivant :

(a) Le rejet valide d'un homonyme primaire, donc objectif, est permanent.

(b) Le rejet d'un homonyme secondaire, donc subjectif, n'est pas permanent; l'homonyme secondaire pourra être retabli lorsque l'homonymie a été provoquée abusivement et disparait.

Point (10)

Article 28, Section 2(a) (: 195)

Les noms d'un taxon basé sur un nom patronymique se terminant par la lettre " q ".

Le Code prévoit d'ajouter la lettre " u " au radical. Cette prévision est absolument injustifiée.

L'introduction de cette lettre " u " modifie le radical même du nom de la personne à qui l'on dédie le nouveau taxon, ce que est certainement contraire à l'intention de l'auteur.

Il est indispensable de supprimer ce paragraphe.

Point (11)

Article 28, Section 2(f)(ii) (: 199) et Section 4(b) (: 202)

L'apostrophe est un signe diacritique comme les autres et doit donc être supprimé. Les deux paragraphies mentionnés cidessus se contredisent.

Point (12)

Article 28, Section 2(g) et (h) (: 199)

Les prévisions concernant les noms de taxons basés sur des noms patronymiques avec un préfixe sont extrêmement mal appropriées. Les appliquer serait introduire un chaos complet et le désaccord des taxonomistes.

(1) Il est fait une différence entre les particules nobiliaires et les autres préfixes. Cette différence est peut-être justifiée théoriquement, mais non en pratique car il est souvent impossible de s'avoir s'il s'agit d'une particule nobiliaire ou d'un article.

(2) Dans le case d'une particule nobiliaire, le radical du nom patronymique est dépourvu de cette particule. Ce nom patronymique ne change donc pas si on supprime la particule en basant le taxon.

(3) Dans le cas d'un préfixe, même s'il s'agit d'un ou de deux articles ayant la même forme que la particule nobiliaire, le nom patronymique est inséparable de ce préfixe que fait partie intégrante du nom. Supprimer une partie ou le tout de ce préfixe équivaut à une modification du nom patronymique.

(4) Que le préfixe soit réuni on non avec le nom lui-même ne change absolument rien. Bien souvent, dans la même famille, une branche a l'article réuni au radical, l'autre pas ; dans d'autre cas il s'agit simplement d'erreurs de l'état civil, erreurs non rectifiées par la suite.

(5) Quand on base le nom d'un taxon sur un patronyme, c'est pour honorer la personne qui porte ce nom patronymique. Il est donc nécessaire que cette personne, et les lecteurs, puissent reconnaître la patronyme qui a donné naissance au nom du taxon. En supprimant le ou les préfixes le nom patronymique est déformé et cette reconnaissance est parfois impossible.

Nommez *plasi* une espèce que l'on veut dédier à Mr. Van den Plas est aussi inconséquent que de créer le nom de *leyi* pour honorer Mr. Bradley.

(6) Dans le projet examiné cette différence théorique entre la particule nobiliaire et le préfixe a été comprise à l'envers, puisque dans le premier cas le maintien de la particule est laissé au choix de l'auteur et dans de second, le préfixe devrait être supprimé. Si l'on voulait à tout prix maintenir la différence entre particule et préfixe, c'est le contraire qui devrait se produire.

(7) Faire une distinction entre les régimes linguistiques ou les nationalités des noms patronymiques ne résiste pas à la critique ; il faut une règle uniforme.

(8) La preuve de ce que l'auteur de projet n'a qu'une très vague idée de ce qu'il propose, c'est qu'il se contredit lui-même ; c'est ainsi qu'il propose d'abord : *vanderhoecki*, *delacroixi*, *vanduzeei*, et plus loin : *orti*, *vechti*, etc.

(9) Si des préfixes doivent être supprimés, pourquoi ne pas supprimer également les préfixes anglo-saxons : *Mac. Fitz, O* ? Or, il n'est pas question de supprimer ces derniers, ce qui serait tout aussi logique que de supprimer un *Van.*

Pour me résumer, je conclus en demandant que les paragraphes (g) et (h) de la Section 2 soient remplacés par un seul, stipulant :

" En basant le nom d'un taxon sur un nom personne comprenant une particule nobiliaire ou un (ou plusieurs) préfixe, cette particule ou ce préfixe peuvent être omis on conservés suivant le choix de l'auteur du taxon. "

Et ajouter : " Ce choix constituera l'orthographe originale valide et ne pourra pas être modifié ultérieurement ".

Point (13)

Article 28, Section 8 (: 203)

Pourquoi ne pas prévoir aussi les suffixes " INI " pour les tribus, et " INA " pour les sous-tribus ? Ces suffixes sont actuellement presque universellement utilisés et il serait souhaitable, dans un but de stabilité et d'uniformité, de les rendre intangibles.

Point (14)

Article 28, Section 16(b)(i), (ii), (iv) (: 223–225)

La terminaison " *ii* " ne devrait pas être admise comme génitif d'un mot ou d'un nom ne se terminant pas par *l*.

Il n'y a aucune raison de laisser indifféremment " smithii " ou " smithi " et seule la seconde forme doit être autorisée.

DOCUMENT 33/8

Proposals and comments concerning various aspects of the Copenhagen Decisions, Professor J. Chester Bradley's Draft of the English Text of the " Règles ", and other matters on the Agenda Paper for the London Congress

By **DONALD F. McMICHAEL**

(*Australian Museum, Sydney, Australia*)

(Enclosure to letter dated 25th March 1958)

Point (1)

A proposal for the amendment or withdrawal of Copenhagen Decision 31 (Article 17 of Professor Bradley's Draft Text) (: 115) :—

W. I. Follett (*Syst. Zool.*, **5** : 33–36, March 1956) dealing with Modifications of the International Rules proposed since Copenhagen, mentions on p. 36 that some provision should be added to the rules governing the designation and restriction of type localities, to the effect that the restricted or designated locality must be consistent with all available information and that a restriction or designation that is not consistent with such information should not be binding on subsequent authors.

To date, I have seen no proposal to the Commission in the *Bulletin of Zoological Nomenclature* to this effect, and am therefore taking action in the matter myself.

Restriction or designation of a type locality for a nominal species will normally happen under two quite different sets of circumstances, as follows :—

(a) When the holotype, lectotype or syntypes are available but do not yield adequate data from their labels. In such cases, it will usually be possible to identify the holotype, lectotype or syntypes with a particular taxonomic species, and the type locality when chosen should fall within the range of the taxonomic species as far as it is known.

(b) When the holotype, lectotype or syntypes are missing, or not available. If the missing holotype is known to have been destroyed, then a neotype should be chosen, thus automatically fixing the type locality as that of the neotype specimen. On the other hand, most designations or restrictions will be made when the type material is not available, either because its location is unknown, or the specimen cannot be made available for study, or because the author has made no effort to locate it. In such cases, the author will try to identify the nominal species with some particular taxonomic species, and will then select as the designated or restricted type locality, a place which lies within the range of that taxonomic species. Later information (either through rediscovery of the holotype, lectotype or syntypes, or because of a taxonomic revision) may show that the original reviser misidentified the species, and that the restricted or designated locality lies outside the range of the taxon to which the nominal species is now referred.

As an example, I shall cite the nominal species *Unio ambiguus* Philippi, 1847 (Abbildung . . . neuer . . . Conch., **3** : *Unio*, p. 7 (47) pl. 3, fig. 2) for which the type locality is given by Philippi as " Nova Hollandia ". In 1934, Iredale (*Australian Zoologist*, **8** : 62–63) identified a species of freshwater mussel from Western Australia as *Unio ambiguus* Philippi, 1847, on the basis of the original description and the figure, but without reference to the holotype. As a consequence, he restricted the type locality to King George's Sound, Western Australia. In a subsequent revision of the taxonomy of the Australian freshwater mussels, Dr. I. D. Hiscock and I have studied the holotype of *Unio ambiguus* Philippi, 1847, and are agreed that it represents a species living in eastern Australia. We therefore have (in m.s.) set aside Iredale's former restriction and made a new restriction in keeping with the range of the species recognised as *Unio ambiguus* Philippi by us.

However, under Copenhagen Decision 31 and Article 17 of Professor Bradley's draft, we could not legally do this ; we could only further restrict the area set down by Iredale.

Probably many similar cases exist, and it is obvious that the restriction of the first reviser which does not conform to all the available information, should not be binding on later authors. I therefore propose that the following provision should be added to Professor Bradley's Draft of Article 17, Section (b) :

" (5) A restricted type locality or a designated type locality which proves to be, in the light of later knowledge, beyond the known natural range of the species, or to be inconsistent with what is known of the original type material, shall not be binding on any subsequent reviser ".

Quite apart from the suggested alteration of this Article, I find myself in agreement with Professor Bradley's comment immediately following the foreword to his Article 17, to the effect that this article is wholly inappropriate to the Code. The fixing of type localities is a taxonomic matter and only impinges on nomenclature when the characters of the holotype, suntype or lectotype are insufficient to identify it. If the morphological characters of the types in question are insufficient to identify the taxon, then it might be a more satisfactory solution to select a neotype, which would be identifiable and carry with it an automatically restricted type locality.

Point (2)

A proposal for the amendment of Copenhagen Decision 137 (2) (Article 20, Section 2(ii), of Professor Bradley's Draft)(: 141)

When at the Paris Congress, a definitition of what constituted designation of a holotype was prepared, the definition was framed in language which gave freedom to workers to recognise as legitimate holotypes, specimens labelled as as such by their original authors at the time of their description, but to which no reference was made in print. The wording " . . . single specimen designated or indicated by the original author at the time of the original description " clearly implies the above to be correct.

Among the proposals submitted to the Copenhagen Congress was one from Professor Bradley aimed at clarification of Article 31 of the old code in which he redefined this requirement as follows :

> " If the author when describing the species designated one and only one specimen to be ' the type ' or its equivalent, that specimen is the holotype. If, in default of publishing such a designation, he is known to have labelled one and only one specimen as ' type ' or its equivalent, that specimen is the holotype " (*Bull. zool. Nomencl.* **10** : 419, par. (2)(ii)).

I do not have any documents detailing the discussions which surrounded this proposal at Copenhagen, but in the Decisions resulting from that congress, the last sentence of Professor Bradley's proposal quoted above is omitted. Whether this is accidental or was done deliberately I do not know.

Whatever the cause of the omission, its effects will be disastrous. It means that many thousands of specimens which have been used in the past as the bases of species descriptions (i.e., as holotypes) and which were so marked by their authors at the time of the description and which have been accepted since as legitimate holotypes, but which were not definitely stated to be such in print are now to be deprived of their status and regarded as syntypes only. In many cases these specimens were figures, measured, or otherwise referred to and sometimes the specific name is based on the locality from which they came. According to the Copenhagen Decisions, all these specimens should now be given equal status with other original material and a lectotype selected. As Fennah (*Syst. Zool.* 6 : 47–48) suggests, no restriction is placed on subsequent lectotype selectors, who may choose any specimen without stating their reasons. Obviously, this will open the way for unscrupulous workers to select some other specimen as lectotype which may cause a nomenclatural shift when the specimen so selected represents a different taxon.

In order to preserve stability, it will be necessary in nearly every case to select as lectotype, the very same specimen which has for years been regarded as the holotype, both by the author of the name and by subsequent workers. The waste of time and publishing space alone will be enormous. If this alteration in the working of the requirements was intentional, it is, in my opinion, a complete injustice to the early workers who marked a specimen as " Type " in good faith when there were no rules of nomenclature to guide them.

I consider this a matter of extreme urgency and request that the following amendment should be made to Article 20, Section (2)(ii) of Professor Bradley's Draft and to Copenhagen Decision 137(2) : The amended version to read as follows :

" If an author when describing a nominal species states in that description that one specimen and only one is to be the ' type ' or uses some equivalent expression, that specimen is the holotype. If an author failed to make a statement to this effect in print, but at the time of the original description marked one specimen and one only as the ' Type ' (either on its label or in a catalogue of the collection) or used some equivalent indication, then that specimen is the holotype ".

I would further add a restriction to the rules governing the selection of lectotypes following on Recommendation 9 or Article 20 of Professor Bradley's Draft to the effect that :

" Other things being equal, a taxonomist should select as lectotype a syntype which has been assumed by previous workers to be the type, especially if it was originally figured, measured, or referred to in the original description ".

A further provision should be included to the effect that after the date of coming into force of the new rules, a statement as to the existence of a holotype must accompany the original description otherwise the specimens on which the species was based are all to be regarded as syntypes.

Point (3)

Comments on Proposals for the Modification of Copenhagen Decision 54 (: 95):

A great deal has already been written about Copenhagen Decision 54 which need not be repeated. I give my views on various proposals below.

1. I feel that the rules to be introduced concerning names in the family-group will cause such a large amount of additional work and confusion to taxonomists, that it would have been better had they not been introduced. To this extent I am in agreement with Professor Myra Keen (*Bull. zool. Nomencl.* **15** : 143).

2. Since the rules have been introduced, they must be framed in such a way as to leave no ambiguity and to cause as little change in nomenclature at present in use as is possible.

Therefore I recommend that :

(a) Copenhagen Decision 54(1)(a) should be rephrased so as to make it quite clear that it is not to be retroactive.

(b) Names proposed as substitutes for older family-group names which were invalid under the old Article 5, which have gained general acceptance, should not be displaced in favour of the older name on grounds of priority.

Consequently I am in agreement with Professor Bradley's suggestion on the amendment of Copenhagen Decision 54(1)(a) (*Bull. zool. Nomencl.* **15** : 253–254) especially as it concerns the date to be given to a new name introduced under the old Article 5.

I am also in agreement with the system of dating and authorship citation suggested by G. H. E. Hopkins (*Bull. zool. Nomencl.* **15** : 186) for substitute names introduced under the old Article 5, prior to the Copenhagen Decisions. In connection with the latter, I would like to point out that I recommended a similar solution in connection with the name MARGARITIFERIDAE, the subject of a recent *Opinion* by the International Commission (see McMichael, *Systematic Zoology*, **5** : 141—142). In this *Opinion* (*Opinion* 495) the Commission has adopted " Haas 1940 " as the authority and date for MARGARITIFERIDAE, i.e., the author and date of the change under Article 5, rather than the author and date of the original name. This should not be taken as a precedent when considering Hopkin's and Bradley's proposals. Under Bradley's proposal, the name MARGARITIFERIDAE would date from 1910 (the date when MARGARITANIDAE was introduced, for which MARGARITIFERIDAE is an amendment), and under Hopkin's scheme the name would have been written as MARGARITIFERIDAE Ortmann, 1910 (F. Haas, 1940, *nom. mut. pro.* MARGARITANIDAE Ortmann, 1910). The latter, though cumbersome, would in my opinion be an ideal solution, and if adopted would solve many of the problems of priority which are bound to arise if some provision to the effect of my recommendation (b) above is not introduced.

Point (4)

Proposal to Modify Article 29(1)(i) of Professor Bradley's Draft (: 250) :

In view of the possibility of conviction and sentence to imprisonment on political grounds (*in absentia*) of political refugees who have fled from a country, I suggest that this subparagraph should be altered to read as follows :

> "If on conviction of a court of law, other than a court established in time of war by an occupying power, he is sentenced to imprisonment (other than when he is a political refugee in another country, and is convicted and sentenced *in absentia*)."

> or alternatively that this subparagraph be replaced by one to read as follows :

> "If he is convicted of some criminal offence, which in the opinion of the other commissioners renders him unfit to hold office."

Point (5)

Proposal to make Recommendation 1 of Article 20 of Professor Bradley's Draft Mandatory (: 138) :

Since it has been considered advisable to make it mandatory for neotypes to be deposited in a museum or other institution which maintains permanent zoological collections, I can see no reason why this should not also be a necessary provision for holotypes and lectotypes and therefore propose that Article 20, Recommendation 1, should be made a mandatory provision of the Article.

Point (6)

Proposal to Extend Article 7, Section 4 of Professor Bradley's Draft to exclude cyclostyled or mimeographed documents from consideration for nomenclatural purposes (: 66) :

Article 7, Section 2(a)(i) of Professor Bradley's draft as at present phrased would allow cyclostyled or mimeographed publications to be accepted as publications for nomenclatural purposes, since they are not prohibited under Section 4. It is, of course, possible that they could be excluded under Section 2(b)(i).

Most cyclostyled or mimeographed publications are no better than carbon copies made on a typewriter, and are frequently much worse. This type of publication should be excluded from acceptance as " publications for nomenclatural purposes " along with microfilms and microcards. Therefore I would add the following provision to Article 7, Section 4 of Professor Bradley's Draft :

> " (7) the distribution of mimeographed or cyclostyled documents, notwithstanding that these may form a periodical which is distributed free or placed on sale ".

PURCHASED
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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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BULLETIN OF ZOOLOGICAL NOMENCLATURE

Volume 15 (pp. 997–1092) *27th June*, 1958

PURCHASED
14 JUL 1958

APPOINTMENT OF OFFICERS OF THE COLLOQUIUM ON ZOOLOGICAL NOMENCLATURE, LONDON, 1958

Statement issued by the International Trust for Zoological Nomenclature

Consequent upon being informed by Mr. Francis Hemming that on the advice of his doctors it will not be possible for him to take part in the meeting of the forthcoming Colloquium on Zoological Nomenclature the following, appointments have been made by the International Trust for Zoological Nomenclature in consultation with Sir Gavin de Beer, President of the Fifteenth International Congress of Zoology shortly to assemble in London :—

To be Chairman of the Colloquium on Zoological Nomenclature

R. G. S. HUDSON, D.Sc., Chief Geologist, Iraq Petroleum Company.

To be Secretary to the Colloquium on Zoological Nomenclature

R. V. MELVILLE, M.Sc., Assistant Secretary to the International Commission on Zoological Nomenclature and Director of the Office of the Commission (on seconded service from the Geological Survey and Museum, London).

FRANCIS HEMMING

Managing Director and Secretary,
International Trust for Zoological Nomenclature

28 Park Village East,
Regent's Park,
London, N.W.1.

30*th May* 1958

CHAIRMANSHIP OF THE INTERNATIONAL TRUST

Statement issued by the International Trust for Zoological Nomenclature

The International Trust for Zoological Nomenclature has great pleasure in announcing that the Right Hon. the Lord Hurcomb, G.C.B., K.B.E., has accepted the Chairmanship of the Trust in succession to the Right Hon. Walter Elliot, deceased.

FRANCIS HEMMING

Managing Director and Secretary,
International Trust for Zoological Nomenclature

28 Park Village East,
Regent's Park,
London, N.W.1.

30*th May* 1958

CASE No. 50

ARTICLE 28, APPENDIX, TABLE 2, PART B GREEK [WORDS] : GUIDANCE AS TO FORMATION OF FAMILY-GROUP NAMES BASED UPON

(Commission Reference Z.N.(S.)1353)

DOCUMENT 50/1

Proposed Revision of certain entries in Part B of Table 2 in the Appendix to Article 28

By **AFRANIO DO AMARAL**

(*Instituto Butantan, Sao Paulo, Brasil*)

(Extract from a letter dated 8th February 1958)

Concerning Table 2, Part B—Greek (*Bull.* **14** : 240—243), I should suggest a revision, if possible, of the following Family names transliterated in Latin as " examples " :

OICIIDAE (p. 238), EICONIDAE, EIDEIDAE and AIDIDAE (p. 241), since in Latin there was no initial diphthong such as *Oi*, *Ei* and *Ai* except when in Greek the original corresponding vowels did not form a diphthong, being written, respectively, *οϊ*, *εϊ* and *αϊ* (with diaeresis).

Instead of *Oiciidae* we should write *Œciidae* : like *Œconomia.*

Instead of *Eiconidae* we should write *Iconidae* : like *Iconographia.*

Instead of *Eideidae* we should write *Ideidae* : like *Idolatria.*

Instead of *Aididae* we should write *Ædidae* : like *Ædepsus.*

CASE No. 51

DRAFT " REGLES ", ARTICLE 28, SECTION 16 (SPECIFIC NAMES BASED ON MODERN SURNAMES) : PROPOSED ADOPTION OF A FURTHER " RECOMMENDATION "

(Commission's Reference Z.N.(S.)1024)

DOCUMENT 51/1

Proposed adoption of a " Recommendation " that, where a specific name is based on a modern patronymic, it should be formed as a substantive in the genitive case if the purpose is to honour the collector of the type material and as an adjective in other cases

By **HOBART M. SMITH**

(*University of Illinois, Urbana, Illinois, U.S.A.*)

(Enclosure to a letter dated 27th September 1955)

The *Copenhagen Decisions on Zoological Nomenclature* (1953 : 53) recommends that, whereas Article 14 now requires that a trivial patronym be formed only as a noun substantive in the genitive case (*e.g. jonesi*), the provision of that Article should be extended to permit the formation of such a specific name as an adjective by the addition of an adjectival termination (*e.g. jonesianus*).

Additionally, the Colloquium recommended that a formal *Recommandation* should be appended to the Article expressing a preference for proposal of patronyms in substantive rather than adjectival form.

In the documents relating to the Case governed by this Decision (1953, *Bull. zool. Nomencl.* **10** : 221) no mention is made of a custom common among plant taxonomists that lends reason, not otherwise evident, to a choice between substantive and adjectival forms for patronyms. This custom is that patronyms honouring the collector be of substantive form in the genitive case, and that patronyms honouring persons other than the collector be of adjectival form.

Inflexible application of the stated botanical custom in zoological taxonomic precedure would apparently be undesirable. On the other hand the possible merit of adding to Article 14 a *Recommandation* that this custom be observed insofar as practicable in zoological taxonomy is worthy of consideration, hereby requested, by the International Commission on Zoological Nomenclature.

CASE No. 52

DRAFT " REGLES ", ARTICLE 20, SECTION 1(b), " RECOMMANDATION " 1 : " RECOMMANDATION " RELATING TO THE DESIRABILITY OF TYPE SPECIMENS BEING DEPOSITED IN PUBLIC INSTITUTIONS

(Commission Reference Z.N.(S.)1305)

DOCUMENT 52/1

Proposed insertion in the " Règles " of a provision invalidating names given to species and taxa of lower rank where the holotype, syntypes or lectotypes are not placed in a public institution

By **P. VIETTE**

(*Muséum National d'Histoire Naturelle, Paris*)

(Statement enclosed under cover of a letter dated 11th February 1958)

The fact, that, to validate the description of a new species or a new subspecies, the holotype must be kept in a recognized public institution that maintains a research collection to which scientists are admitted, was already evocated at the 1953 Copenhagen International Colloquium of the Zoological Nomenclature. Unfortunately, this proposition was, at this time, rejected by a majority.

2. The new text of the *Règles* states that a neotype to be validated must be kept in a public institution as above. Why not apply the same rule when a holotype is created to validate the name of a new species or a new subspecies or the designation of a lectotype ?

3. Holotypes, lectotypes and neotypes, having the same scientific value as type specimen of the species or the subspecies and being the property of Science must not be found in a private collection (often for lucrative views).

4. It would thus be necessary that the 1958 London International Colloquium of the Zoological Nomenclature decides to include in the *Règles* new paragraphs, for instance in the Article 20 or a new Article which could be drawn as follows :

(1) The description of a new species or a new subspecies will only be validated if the holotype (or a series of syntypes, if the author does not desire to designate any holotype) is kept in a recognized public institution that maintains a research collection to which scientists are admitted.

(2) The designation of a lectotype will only be valid if the lectotype, so designated, is kept in a public institution as above.

(3) Holotypes (or syntypes) and lectotypes are properties of Science and not those of a private collector.

This text could come into effect from 1st January, 1960.

After this date, the name of the species or subspecies, the holotype of which would not be kept in a public institution as above, would have to be placed on the *Official Index of Rejected and Invalid Specific Names in Zoology.*

DOCUMENT 52/2

Objection to the insertion in the " Règles " of a provision for the compulsory deposit of type material in public institutions

By **FRANCIS HEMMING, C.M.G., C.B.E.**

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 20th February 1958)

At its Session held in Paris in 1948 the Thirteenth International Congress of Zoology agreed to insert in the *Règles* a " Recommandation " urging authors (a) when describing new species to place the holotypes of those species in public institutions or (b) when selecting lectotypes for previously established nominal taxa to secure that the lectotype so selected was placed in such an institution (1950, *Bull. zool. Nomencl.* **4** : 187, Point 75(6)). The provision so adopted has been incorporated in the Draft of the English text of the Revised *Régles* in Article 20, Section 1(b), Recommendation 1 (1957, *Bull. zool. Nomencl.* 14 : 139).

2. The reason which has led me to submit the present note is the presentation to the coming Congress of a proposal that the non-mandatory " Recommandation " inserted into the *Règles* by the Paris Congress should be converted into a mandatory provision under which a name proposed for a new species would be invalid unless its holotype had been deposited in a public institution and a lectotype selection made for a previously established nominal species would also be invalid unless the syntype so selected to be the lectotype was deposited in such an institution. Everyone will, I am sure, be in favour of the " Recommandation " adopted by the Paris Congress, but the conversion of that " Recommandation " into a mandatory provision would create an entirely new situation and one which on closer inspection would, I feel confident be generally regarded as being open to serious practical objection.

3. Far from promoting stability in zoological nomenclature, the proposal submitted would have an exactly opposite effect, for under it a name published for a new species with an excellent description and figures might be invalid possibly for years if its type material were not deposited in some public collection. Indeed, if the nominal taxon concerned was based upon a unique holotype, the name might remain invalid indefinitely. What would be still worse, it would under such a system be impossible ever to give a valid name to such a species unless and until a second specimen was discovered. Clearly no system however, well-intentioned which could lead to such anomalous results could be regarded as satisfactory.

4. Moreover serious difficulties would inevitably arise if the type specimen of a nominal taxon, the name of which had been rejected under the proposed provision, were at some later date to find its way into a recognised museum. Would the name thereupon acquire the status of availability ? If so, as from the date on which the name was originally published and rejected or from the date on which the type specimen arrived at the museum or that on which the arrival of the type specimen in the museum was first duly published ? One has only to ask these questions to see what a powerful (though unintended) instrument for the upsetting of established names would be brought into existence if a provision of the kind here under discussion were to be adopted.

5. Finally, it must be recalled that much rich material has been obtained in the past from little known regions by collectors who recouped themselves of the expenditure incurred by the sale of the specimen which they collected. An important part of the receipts so obtained was commonly derived from the sale of those of the specimens concerned which had become types when the collections obtained were worked over. Any provision which required that such specimens should already be in museums before they became types would deprive the organisers of such expeditions of an important part of the funds till now available in such cases for meeting the expenditure involved. It cannot be doubted that the effect would be to reduce the number of such expeditions and thus to slow down the rate at which knowledge of the fauna of little-known places is obtained.

6. I would therefore recommend that the provision relating to the deposit of type specimens in public institutions should remain as at present a non-mandatory *Recommendation*.

CASE No. 53

DRAFT " REGLES ", ARTICLE 24, SECTIONS 8(a) AND 10(a) : RELATIONSHIP FOR PURPOSES OF THE LAW OF HOMONYMY OF VARIANT SPELLINGS OF NAMES BASED ON GEOGRAPHIC TERMS

(Commission Reference Z.N.(S.)961)

DOCUMENT 53/1

Request for a Ruling that any two generic names or trivial names in the same genus, each based upon a word transliterated into the Latin alphabet from a language using another alphabet but differing from one another in the transliteration used, be treated as homonyms of one another

By **TEISO ESAKI**

(*Kyushu University, Fukuoka, Japan*)

(*Note :* This paper was handed in by the late Professor Teiso Esaki during the Copenhagen Colloquium and was published after the close of that meeting (1954, *Bull. zool. Nomencl.* **10** : 523–526). The subject matter was not fully dealt with at Copenhagen, and the present paper is reprinted for consideration by the London Colloquium in connection with Professor Tadeusz Jaczewski's communication of 30th May, 1955.)

In connection with the request submitted by Dr. Hachisuka (1952, *Bull. zool. Nomencl.* **9** : 102–103) the National Sub-Committee on Zoological Nomenclature, National Committee on Zoology, Science Council of Japan, decided to prepare the draft of a ruling to be inserted in some proper place of the *Règles* that generic or trivial names based upon the names of persons or places other than the Latin derivative or upon barbarous words, each consisting of a variant of a previously published name derived from the name of the same person or place or the same word, and are based upon a word transliterated into the Latin alphabet from a language using another alphabet, and the difference(s) so displayed is (are) due to different methods of transliteration, are to be treated as junior homonyms of the earlier names so published. This problem is especially connected with some Asiatic animals, of which the scientific names are based upon names of persons or places. The author, as the Chairman of the Sub-Committee, accordingly personally consulted and discussed the whole problem with Dr. Hachisuka and prepared the present draft, which was approved by Dr. Hachisuka and by the Sub-Committee.*

We reached the conclusion that the ruling should cover as many cases as possible, as suggested by Mr. Hemming, Secretary to the International Commission on Zoological Nomenclature, in connection with Dr. Hachisuka's application (1952, *Bull. zool. Nomencl.* **9** : 103). The co-ordination of various cases derived from different languages proved, however, rather difficult. The following scheme was intended to cover as many as possible of the cases involved at present.

The Sub-Committee submits to the Commission for consideration, that the recommendation to be given in connection with the Article 34 of the *Règles* and *Opinion* 147, agreed by the Commission at the 6th Meeting, Paris, July, 1948 (1950, *Bull. zool. Nomencl.* **4** : 161–162) should be further expanded so as to cover as many as possible of the cases to be expected, and therefore :

It is recommended that, where it is evident that two generic names or two trivial names in the same genus (1) consist of the same Latin word or of the same Latinised word (including proper names other than modern patronymics), or (2) are based upon the same modern patronymic, or (3) are based upon the name of the same continent, country, district, town or other place or upon the name of the same geographical feature such as a mountain, island, sea, river or lake, or (4) are based upon the same barbarous word, and the said generic names or the trivial names of the same genus are distinguished from one another only by one or more of the undermentioned differences in spelling, the two names are to be treated as homonyms of one another.

(a) the use of " ae ", " oe " and " e " (*caeruleus, coeruleus, ceruleus*) ;
(b) the use of " ei ", " i " and " y " (*chiropus, cheiropus* ; *japensis, yapensis*) ;
(c) the use of " c " and " k " (*coreanus, koreanus* ; *micado, mikado*) ;
(d) the use of " v " and " w " (*okinavanus, okinawanus*) ;
(e) the use of " c " and " z " (*ceylonensis, zeylonensis*) ;
(f) the use of " s " and " z " (*lusonicus, luzonicus*) ;

---

* Approved by Dr. Hachisuka on 8th May 1953, and by the Sub-Committee on 25th May 1953. The author regrets to record that Dr. Hachisuka died suddenly on 14th May 1953, of angina pectoris, at his residence in Atami at the age of 52.

(g) the aspiration or non-aspiration of a consonant (*oxyryncus*, *oxyrhynchus*);

(h) the presence or absence of a "c" before a "t" (*autumnalis*, *auctumnalis*);

(i) the use of "m" and "n" before a consonant (*septemtrionalis*, *septentrionalis*; *symplecta*, *synplecta*);

(j) the use of a single or double consonant (*litoralis*, *littoralis*).

In the case of names derived from the names of persons or places or some other word originally written in the Cyrillic or some other alphabet, and the differences are due to the different methods (*e.g.* English, German, French or Dutch) of transliteration:

(a) the use of "u", "ou" and "oe" (*buruensis*, *bourouensis*, *boeroeensis*);

(b) the use of "kh", "ch", "gh" and "h" for Cyrillic "x" or an equivalent;

(c) the use of "ch", "tsch" and "tch" for Cyrillic "Ч" or an equivalent;

(d) the use of "ts" and "z" for Cyrillic "Ц" or an equivalent;

(e) the use of "g" and "h" for Cyrillic "Г";

(f) the use of "sh", "sch" and "ch" for Cyrillic "Ш" or an equivalent;

(g) the use of "shch", "shtch", "shtsh", "schtsch" and "chtch" for Cyrillic "Щ";

(h) the use of "v", "w", "f" and "ff" for Cyrillic "B" or an equivalent;

(i) the use of "zh", "dsch" and "j" for Cyrillic "Ж" or an equivalent;

(j) the use of "ja'' and "ya" or "ju" and "yu" for Cyrillic "Я" or "Ю".

In the cases of names derived from the names of persons or places of Japan or any other Japanese word, in which differences are due to the use of different systems of transliteration,* or to the use of a sharp or soft consonant, the following differences may be dealt with as shown below:

---

* There are several systems of transliteration used in Japan. The so-called "Hepburn's system", in which the vowels are transliterated as in German or Italian, while the consonants are latinised like in English, is the oldest in origin and is still in very wide use, while the so-called "Nippon system", based on theoretical grounds based on the construction of the Japanese language, is more strongly supported in younger academic circles than the former. The two systems differ from each other in expressing several sounds by different consonants as summarized above. A slightly modified system of the latter, the "Kunrei (or Instruction) system", was officially adopted as the standard method of transliteration by the Japanese Government in 1937, but in spite of this act, all three systems are now in use even by governmental bodies.

(1) Either of each of the following groups of syllables or consonants may be used to express the same sound :

> " shi " and " si " ; " chi " and " ti " ; " tsu " and " tu " ; " fu " and " hu " ; " ji ", " zi " and " di " ; " j " and " zy " before an " a ", " o " or " u " ; " sh " and " sy " before an " a ", " o " or " u " ; " ch " and " ty " before an " a ", " o " or " u " ; " m " and " n " before a labial consonant.

(2) Either consonant in each of the following groups may be used in some cases to express one and the same syllable according to the arbitrary pronunciation in preference to the other :

> " k " and " g " ; " s ", " j " and " z " ; " t " and " d " ; " h " and " b " ; " h " and " w " ; " sh " and " j " ; " ch " and " j ".

The problem whether the present ruling could be further expanded as to cover cases, in which the names are derived from more or less different words of the same meaning and origin, such as *japonicus*, *japanicus* ; *nipponicus*, *niphonicus*, *nihonicus* ; *berlinensis*, *berolinensis* ; *ceylonicus*, *zeylanicus* ; or the names are derived from the same geographical term and have the ending, " -ensis ", but differ from one another in spelling, for example, such names as *borneensis*, *borneiensis*, *bornensis*, *borneoensis*, *borneonensis* ; should be submitted for further discussion. The difference in names with or without diacritical marks may also be discussed in connection with the present case, and in that event the recent article by Paclt (J. Paclt, Über die Behandlung der diakritischen Zeichen, 1952, *Senckenbergiana* **33** : 357–361) may usefully be consulted.

DOCUMENT 53/2

Comment on certain points raised by Professor Teiso Esaki in regard to the position in relation to homonymy of certain names consisting of variant spellings of geographic terms

By **TADEUSZ JACZEWSKI**

(*Polish Academy of Sciences, Institute of Zoology, Warsaw, Poland*)

(Letter dated 30th May, 1955)

Although with some delay, I would like to make the following additional comment in connection with Document 53/3 by Prof. Teiso Esaki, published in *Bull. zool. Nomencl.*, London, **10** : 523–526 :

The example of the pair of names *japensis* and *yapensis* is inadequate for the recommendation given in point (b) in p. 524. The facultative use of *ei*, *i* or sometimes *y* is found in names of classical derivation, while the above example concerns names differing not by *i* and *y*, but by *j* and *y*, and is the result of different methods of transliteration. It is clearly evident that the spelling *japensis* is based on the German method of transliteration, and the *j* has to be pronounced as in German or in the Slavonic languages which use the Latin alphabet, as Polish, Czech and some other. The spelling *yapensis* is transliterated according to the English or French method. In any case the example does not belong to the recommendation concerning the use of *ei*, *i* or *y*. The whole matter is not so simple, and I think that the question of facultative variants of spelling in names derived from classical words should be dealt with as a separate one and independently of the various methods of transliteration of modern names derived from languages using an alphabet different from the Latin, or possessing no alphabet.

2. The recommendations in the points (a), (g), (h), (i) and (j) on p. 524 of the Document in question apply to names of classical origin only. The recommendation in point (c) on p. 524 is good both for classical and many, but not all, modern names. The recommendation in points (d), (e) and (f) on p. 524 belong to the field of variants of transliteration.

3. In other words, I think that such recommendations as proposed in the Document in question should be given separately for (1) names based on words of classical origin, and (2) names derived from modern words.

4. The best method of transliteration of words taken from languages using an alphabet other than the Latin alphabet, or possessing no alphabet, would be perhaps a method similar to the " Hepburn's system ", used in Japan, as described by Prof. Teiso Esaki, *l.c.*, p. 525. The vowels could be transliterated in German, Italian or the Slavonic languages using the Latin alphabet, *j* as in German or the mentioned Slavonic languages, *c* as in the Slavonic languages, other consonants as in English with such additional combinations as *zh*, *dzh* and perhaps some others.

5. On p. 525, in point (d), there should be added the possible variant *c* which should be treated as homonymous with *ts* or *z* (German method) in the transliteration of the Cyrillic Ц.

6. On the same p. 525, in point (i), there is an obvious error : the Cyrillic Ж has never the phonetic value of *dsch*. In all languages using the Cyrillic alphabet it has always the phonetic value of the French *j*.

7. It should be also noticed that the points given on p. 525 of the Document under consideration take into account the Cyrillic alphabet only as it is used in Russian. There will be some more variants if other languages using the Cyrillic alphabet are taken under consideration as well.

CASE No. 54

DRAFT " REGLES ", ARTICLE 28, SECTION 8 : TERMINATION TO BE ADOPTED FOR THE NAMES OF TRIBES AND SUPERFAMILIES RESPECTIVELY

(Commission Reference : Z.N.(S.) 1356)

DOCUMENT 54/1

Information regarding the acceptability of certain terminations for the names of tribes and superfamilies furnished to the Copenhagen Congress of 1953 by Leonard P. Schultz (Washington)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 1st April 1958)

At Copenhagen in 1953 the Fourteenth International Congress of Zoology, after re-affirming the terminations to be used for the names of families and subfamilies, postponed for later consideration the question of the termination to be used for tribes (then defined as taxa belonging to a category below the subfamily level) and superfamilies (1953, *Copenhagen Decisions zool. Nomencl.* : 33, Decision 47(2)). In the above connection it is thought that it would be of interest to the London Colloquium to have before it the following extract from a note by Dr. Leonard P. Schultz (*Smithsonian Institution, Washington, D.C., U.S.A.*) in which are given particulars of replies received from a considerable number of specialists in various groups to questions put to them as to the acceptability of a certain specified terminations for taxa belonging to each of the above categories. The document in question was submitted to the Copenhagen Congress in a paper by Dr. Schultz which was published in full as Document 4/6 on the Copenhagen Agenda Paper (1953, *Bull. zool. Nomencl.* **10** : 5—8).

ANNEXE TO DOCUMENT 54/1

Results of a preliminary survey of group endings in zoological classifications above the category of genus

By **LEONARD P. SCHULTZ**

(*Smithsonian Institution, United States National Museum, Washington, D.C., U.S.A.*)

(Communicated under cover of a letter dated 26th September 1951)

Late in 1948 the author inquired of twenty-seven North American ichthyologists in regard to fixing specific endings for various categories of classification. Replies were favourable. In order to obtain information on a broader basis, during the early part of 1949 specialists in the fields of carcinology, entomology, herpetology, ichthyology, invertebrate zoology, malacology, ornithology, mammalogy, paleontology, and parasitology, were consulted. Entomologists and ornithologists have, to a certain extent, already adopted endings for various Groups of classification. After discussions with about twenty specialists in the various fields, and knowing that numerically entomologists nearly outnumber the specialists in all other fields together, it was decided to follow the endings as already used by entomologists from Superfamily down through Subtribe, but to follow ornithologists for the ending of an Order (-iformes) and for Sub-Order (-oidei) as used by certain vertebrate zoologists, both minorities, for the purpose of stirring up discussions and inviting comments. The results were interesting and valuable.

Somewhat as an afterthought the idea of a type genus was added to the circular letter sent out. This was an error, since it was misunderstood by a sizable percentage, who did not distinguish the type genus concept from the entirely separate concept of stabilisation of group endings.

The author sent out the circular letter to over 700 North American systematic zoologists on the mailing list of the Society of Systematic Zoology and received 445 ballots in return. This circular proposed to fix the endings of Groups above the level of the genus, and results were as follows :

Number of votes cast concerning proposed endings used in groups of classification[1]

Field	Votes	Super-family -oidea	Super-Tribe -idi	Tribe -ini	Sub-Tribe -ina
Carcinology	For	19	18	19	19
	Against	4	5	4	4
Entomology	For	155	140	154	127
	Against	3	13	4	15
Herpetology	For	29	26	27	26
	Against	—	2	1	2
Ichthyology	For	39	38	39	38
	Against	1	1	1	1
Invertebrate	For	36	38	38	37
Zoology	Against	12	9	9	10
Malacology	For	16	13	13	13
	Against	1	3	3	3
Ornithology	For	25	21	22	21
	Against	—	2	1	2
Mammalogy	For	35	29	30	32
	Against	—	5	4	2
Paleontology	For	20	19	17	14
	Against	7	8	10	13
Parasitology	For	34	31	33	31
	Against	1	3	2	3
Totals	For	408	373	392	358
	Against	29	51	39	55
GRAND TOTAL		437	424	431	413
Per cent.	For	93.3	88.0	91.0	86.7
	Against	6.7	12.0	9.0	13.3

The following information is summarised from comments received on about half of the ballots returned : "A wonderful idea and attempt to advance stability of zoological nomenclature"; "Leave nomenclature alone and get back to the study of specimens."

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[1] This Table as originally prepared by Dr. Schultz contained additional columns relating to certain matters (e.g. the terminations for Orders and Sub-Orders, etc.) which, though relevant to the purposes for which the paper was constructed are not relevant for the purposes of the forthcoming Colloquium. (int'd.) F.H. 10th March 1958.

. . . .

Superfamily : Little or no comment.

Supertribe, tribe, subtribe : These categories are used in the most complicated groups of species, mostly in insects, fishes and crustacea. Some individuals voted against these categories because they did not use or need them in their own speciality. A sizable majority want the endings for these categories fixed for all time. Mary Rathbun in crustaceans was the only one mentioned using these groups above the family level.

DOCUMENT 54/2

Observations on Article 28, Section 8, of Prof. Bradley's Draft " Règles "

By **R. A. CROWSON**

(*Department of Zoology, University of Glasgow, Glasgow, Scotland*)

(Enclosure to a letter dated 8th March 1958)

In formulating a new International Code, which we presumably expect to remain in force for the rest of the century at least, I can see no good reason for restricting the rules for suffixes to families and subfamilies only. The great majority of systematists today use superfamilies and tribes and the long-term trend has been towards the use of more and more categories, which permit the more accurate expression of phylogenetic relationships. The terminations for superfamilies and tribes are in fact almost completely standardised by usage, and the Commission should give this usage the force of law. If the Code is to be formulated with an eye to the future, I think it would be desirable to incorporate the standard ending -ina for subtribes, which are likely to come into increasing use.

CASE No. 55

EXISTING " REGLES " : ACTION RECOMMENDED TO BE TAKEN FOR THE PURPOSE OF CONSOLIDATING IN THE REVISED " REGLES " THE PROVISIONS APPEARING IN SECTIONS "A" TO " E " OF THE "APPENDICE " OF THE EXISTING " REGLES "

(Commission Reference : Z.N.(S.) 1333)

DOCUMENT 55/1

Action recommended in regard to the provisions included in Sections "A " to " E " of the "Appendice" to the existing " Règles "

By **FRANCIS HEMMING,** C.M.G., C.B.E.
(*Secretary to the International Commission on Zoological Nomenclature*)

(Report dated 27th August 1957)

Introductory

In the early part of the present year Professor J. Chester Bradley informed me that it had not been in his mind to deal in his Draft of the English text of the *Règles* with the provisions which appear in the *Appendice* to the existing *Règles*. It was evident, however, that these provisions would need to be considered by the London Congress, and it was accordingly arranged at Professor Bradley's suggestion that this task should be undertaken by myself. Separate Case Numbers have been allotted to the problems raised in Section " F " (" Transliteration of Greek words ") and Section " G " (" Transcription of Geographic and Proper Names ") of the *Appendice* to the existing *Règles*. The present note is concerned only with the problems raised in Sections "A" to " E " of the *Appendice*.

2. The questions raised in the Sections of the *Appendice* with which we are here concerned are of a miscellaneous character and probably owe their presence in the *Appendice* to the fact that they did not fit conveniently into any of the Articles of the *Règles* as drafted by Professor Raphael Blanchard, i.e. in the *Règles* as approved by the Berlin Congress in 1901. In the circumstances it appears to me that the most convenient course will be to comment in turn on the provisions contained in each Section and to make suggestions as to the procedure to be adopted for incorporating those provisions in the revised text of the *Règles*.

Comments on Sections "A" to " E " of the "Appendice "

3. Section "A", First sentence : This provision contains a recommendation that papers dealing with systematic zoology should be written only in one or other of five specified languages. It now appears in *Recommendation* 2 in Article 10 (1957, *Bull. zool. Nomenclature* **14** : 79). This transfer is in accordance with a decision taken in Paris in 1948 by the Thirteenth International Congress of Zoology that greater prominence should be given to this recommendation by transferring it from the *Appendice* to the main body of the *Régles* (1950, *Bull. zool. Nomencl.* **4** : 221, Decision 15(1)(e)(g)).

4. Section "A", Second Sentence : This provision, which contains a recommendation that type specimens should be deposited in museums and their museum number stated, was re-enacted in clearer terms by a decision taken by the Copenhagen Congress in 1953 (*Copenhagen Decisions zool. Nomencl.* : 76–77, Decision 145). The decision so taken has been incorporated by Professor Bradley in his Draft of the *Règles* as Recommendation 21 in Article 10 (1957, *Bull. zool. Nomencl.* **14** : 83).

5. Section "A", Third Sentence : The third sentence of Section "A" did not form part of the *Appendice* as approved by the Berlin Congress of 1901 but was added by the Monaco Congress in 1913. It deals with the need for basing the description of a species upon a single type specimen labelled as such [i.e. upon a holotype] and not, as was formerly the general practice, upon a series of syntypes [incorrectly referred to in this Section as " paratypes "]. This subject was dealt with more fully in 1948 by the Paris Congress which agreed that a *Recommendation* setting out the desired procedure should be inserted in the *Règles* (1950, *Bull. zool. Nomencl.* **4** : 187, Decision 75(7)(a)). The decision so taken by the Paris Congress has been incorporated by Professor Bradley in the Draft of the Revised text of the *Règles* as *Recommendation* 7 in Article 20 (1957, *Bull. zool. Nomencl.* **14** : 141).

6. Section " B " : This Section contains a recommendation as to the provision of explanations to figures in one or other of the five languages specified in the first sentence of Section "A" in the case of papers published in languages other than any of the five referred to above. This provision clearly should appear in the *Règles* in close proximity to that which formerly appeared in Section "A" and which now appears in *Recommendation* 2 in Article 10 in Professor Bradley's Draft (see paragraph 3 above). It is accordingly recommended that the provision which has hitherto appeared in Section " B " of the *Appendice* should be transferred, as a *Recommendation*, to Article 10 of the *Règles*, being there either incorporated in *Recommendation* 2 or included in a new *Recommendation* following immediately thereafter.

7. Sections " C ", " D " and " E " : Each of these Sections contains a recommendation as to the method of recording measurements which it is desirable should be employed in describing specimens. These recommendations have a particular reference to the description of type specimens and it is suggested therefore that they should be inserted as *Recommendations* in Article 10 which deals expressly with the establishment of new nominal taxa and the publication of new names. It is suggested that the most appropriate point in the above Article at which to insert these *Recommendations* would be between *Recommendations* 20 and 21 (1957, *Bull. zool. Nomencl.* **14** : 83).

Conclusions and Recommendations

8. In the light of the considerations set out above I have formed the following conclusions and submit the following recommendations :—

(1) The matters dealt with in Section "A" to " E " of the *Appendice* are of a miscellaneous minor (though important) character which did not fit very appropriately into the structure of the draft *Règles* as placed before the Berlin Congress of 1901 and which were therefore relegated to an annexe termed the *Appendice*. The provisions appearing in these Sections of the *Appendice* do not differ in general character from many matters which were incorporated in the *Règles* by the Paris (1948) and Copenhagen (1953) Congresses. Indeed some of the provisions in these Sections of the *Appendice* were actually transferred to the main body of the *Règles* by one or other of the above Congresses. It is recommended that this process should now be completed and that these Sections be thereupon deleted, instead of, as proposed by the Paris Congress (1950, *Bull. zool. Nomencl.* **4** : 65) being included in the Schedule into which it was then agreed that the *Appendice* as a whole should be converted.

(2) No action is called for in connection with Section "A", the three provisions included in it having already been incorporated in the *Règles* (paragraphs 3–5).

(3) It is recommended :—

(a) that the provision embodied in Section " B " be transferred to Article 10 in Professor Bradley's Draft and be there included either in *Recommendation* 2 or in a new *Recommendation* to be inserted immediately after that provision (paragraph 6) ;

(b) that the provisions which now appear in Sections " C ", " D ", and " E " be transferred to Article 10 in Professor Bradley's Draft and be there inserted as *Recommendations* between the existing *Recommendations* 20 and 21 (paragraph 7).

CASE No. 56

DRAFT " REGLES ", ARTICLE 19, SECTION 1 : INTERPRETATION OF THE EXPRESSION " TYPE-SPECIES " IN RELATION TO A NOMINAL GENUS

(Commission Reference : Z.N.(S.) 1243)

DOCUMENT 56/1

Proposed insertion in Section 1 of Article 19 of Professor J. Chester Bradley's Draft of the Revised English text of the " Règles " clarifying the expression " type-species " of a genus

By **FRANCIS HEMMING,** C.M.G., C.B.E.
(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 11th October 1957)

The purpose of the present note is to draw attention to an obscurity of long standing in the meaning of the expression " type species " as used in relation to a nominal genus, and to suggest a means for setting this difficulty at rest.

2. The point here at issue was raised by Professor Raymond C. Moore (*University of Kansas, Lawrence, Kansas, U.S.A.*) in the following letter dated 6th May 1957 :—

> Can you advise me whether consideration has been given in drafting the new *Règles* to definition of the status of a subspecies (nominal-typical or other) designated as type species of a genus (or subgenus) ? For quite a large number of generic (and subgeneric) units this has far-reaching importance and it seems not to be covered in the *Copenhagen Decisions* or other authoritative pronouncements I can find.

3. The problem so advanced had in fact arisen in connection with at least two cases which had been dealt with by the International Commission in recent years. The nature of these cases and of the action in regard to them taken by the Commission when dealing with them is set out in the following letter which, as Secretary, I addressed to Professor Moore on 18th June 1957 :—

Status of a nominal subspecies when designated or selected as the type species of a genus or subgenus

> With reference to your enquiry of the 6th May, am I right in thinking that the problem which you are concerned with is what is the position when a taxon, originally described as a subspecies, is later designated or selected as the type species of a genus ? To make sure that I have got your point correctly, I would like to illustrate it by an actual case dealt with by the Commission (in my own group) in *Opinion* 177 which is concerned with a question of the species to be accepted as the type species of the genus *Euchloë* Hübner. Hübner placed seven nominal species in this genus, of which the first he called " *Euchloë belia* Esp.". The species described and figured by Esper under the names *Papilio belia* is a perfectly well-known Mediterranean species which was universally known by that name for about 100 years. In 1871, however, it was pointed out by Kirby first that Esper was not the author of the name *belia*, he having only employed the older name *belia* Linnaeus, and second that the species so named by Linnaeus was not the Mediterranean species to which the name had universally been applied but a quite different North African species, the female of which faintly resembled the species which for so long had been known by the name *belia*. Kirby thereupon re-named the Mediterranean species *Euchloë ausonia* Hübner var. *esperi*. You will see that he treated the Mediterranean taxon not as a separate species but as a subspecies of the taxon represented by another nominal species, namely, *Papilio ausonia* Hübner which in fact referred to a third species. The Mediterranean species (i.e. the false *belia*) was selected as a type species of *Euchloë* Butler in 1870 and was universally accepted as such by later authors. The information set out above is given only for background purposes and is not of direct bearing on the matter in which you are interested. Your point does, however, come in at the next stage, namely, when the Commission was asked to use its Plenary Powers in the interests of stability to confirm the technically invalid selection by Butler of the Mediterranean species as a type species of *Euchloë*. The Commission in the *Opinion* referred to above approved this proposal and in recording its decision cited the Mediterranean species under the oldest available name (*esperi*) which I have shown above was originally published as the third term of a trinominal combination. A similar case in the Echinodermata was dealt with by the Commission under its Plenary Powers in *Opinion* 209 when it designated *Spatangus brissus* var. *unicolor* Leske, 1778, to be the type species of *Brissus* Gray, 1825.
>
> Whether a given taxon ought to be regarded as representing a separate species or as constituting a subspecies of some other species is a purely taxonomic matter with which nomenclature is not concerned. It would,

> however, be quite absurd if in the case of a genus established without a designated or indicated type species one of the included species were to be ruled out as unavailable for selection as the type species of the genus merely because the author by whom the " specific " name concerned had been published had described the taxon in question as a subspecies of some other species.
>
> Although, as I have shown, the Commission has at least twice taken action in the foregoing sense, no express provision on this subject in the *Règles* has so far been considered necessary. If, however, you take the view, which I am rather inclined to take myself, that a provision on this subject ought to be included in the *Règles*, I will consider what suggestion on this subject might appropriately be placed on the Agenda for the London Congress.

4. In a letter dated 15th July 1957 Professor Moore intimated as follows his agreement with the suggestion made in my letter of 18th June 1957 (paragraph 3 above) that this matter should be put to the London Congress for decision :—

> I thank you very much indeed for your discussion of a genus or subgenus based on a nominal subspecies as type species (written to me on 18th June 1957). In the examples cited the originally published trinominal becomes a binominal. In paleontology we have several examples of " varieties " (= subspecies) of nominal type species of genera (described concurrently or subsequently) and question has arisen about disposition of these. In my view there is not possibility for recognition of subspecies in paleontology and I am urging contributors to the *Treatise* [*of Invertebrate Paleontology*] to be guided by this view.
>
> I do indeed think that the subject of type species of genera or subgenera based on nominal subspecies should be specifically dealt with in the revised Code as you suggest in the last paragraph of the 18th June letter.

5. It appears to me that the appropriate place for dealing with this matter would be by the insertion in Section 1(a) of Article 19 of Professor Bradley's Draft of a new sub-section as follows and I recommend that this should be done :—

> (i) For the above purpose a " type-species " may be either a taxon established as a nominal species or a taxon established as a nominal subspecies.

CASE No. 57

DRAFT " REGLES ", ARTICLE 15 : PROPOSED INSERTION OF PROVISIONS RECOGNISING THE CONCEPT " SUPERSPECIES "

(Commission Reference : Z.N.(S.) 1304)

DOCUMENT 57/1

Proposed insertion in the " Règles " of provisions recognising " superspecies " as a special category for the classification and nomenclature of taxa belonging to the above group as now proposed to be defined

By

S. G. KIRIAKOFF

(*University of Ghent, Belgium*)

and

Z. LORKOVIC

(*University of Zagreb, Yugoslavia*)

(Enclosure to a letter dated 14th February 1958)

The purpose of the present application is to seek the grant of a formal status for names given to taxa treated as belonging to the category " superspecies ", a category first recognised some thirty years ago and one which is now widely accepted.

2. The expression " superspecies " was introduced by E. Mayr (1931) as a substitute for the expression " Artenkreis " proposed by S. Rensch in

1929. Mayr's most recent definition of the concept " superspecies " is the following (Mayr, *et al.*, 1953) :—

> A superspecies is a monophyletic group of very closely related and largely or entirely allopatric species.

The above definition is followed by a short comment, the last portion of which runs thus :—

> Superspecies are not distinguished by a special nomenclature. They are, however, listed as such in monographs and catalogues. They are chiefly important in zoogeographical and speciation studies (*op. cit.* : 29).

3. The expression " Superspecies " was again proposed, presumably independently from Mayr, by F. A. & M. Schilder (1939). So proposed, the expression has a meaning equivalent to that of " Formenkreis " of Kleinschmidt (1900). This concept, originally entirely geographical, has been adjusted to modern needs and provided with a definition in Schilder (1952 : 25). Schilder says :—

> . . . der Begriff Formenkreis (bedarf) jetzt insofern eine Erweiterung, als unter bestimmten Bedingungen ihm auch solche Formen angeschlossen werden müssen, die im gleichen Raume nebeneinander leben, also dem Prinzip des gegenseitigen Ausschlusses nicht gerecht werden ; daher definieren wir neu :—
>
> Eine Superspezies (Formenkreis) besteht normalerweise :—
>
> (a) aus einer Anzahl von Spezies und Subspezies verschiedener Differenenzierungsstufen, welche sich gegenseitig geographisch, ökologisch oder in ihrem zeitlichen Auftreten vertreten und an ihren Verbreitungsgrenzen höchstens in schmaler Zone überschneiden, bisweilen unter Bildung von Zwischenformen ;
>
> (b) die am Rande des Gesamtareals lebenden Formen können als Peritypen das Gebiet ihrer Nachbarn auch in ausgedehnterem Mässe überdecken oder als Schizotypen auf engem Raume nebeneinander leben ;
>
> (c) die fossilen Ahnen dieser Formen müssen zu jeder Zeit einen analogen, wenn auch weniger ausgedehnten und einfacher zusammengesetzten Formenkreis gebildet haben (welcher der Superspezies einzugliedern ist) und auf eine einzige Stammform zurückgeführt werden können.

4. S. G. Kiriakoff (1948) proposed the expression " ultraspecies ", not as a substitute for Mayr's " superspecies ", but for a new concept that no longer reposed on a purely geographical basis. Kiriakoff's definition of the concept " ultraspecies " was as follows (*loc. cit.* : 68) (Author's translation) :—

> An ultraspecies is a monophyletic group of sympatric and/or allopatric species and/or semispecies which differ from each other morphologically or otherwise too much to be placed in a single species.

5. In a later discussion (1956) Kiriakoff stressed, amongst other points, that in principle the so-called " sibling-species " should be placed in ultraspecies. The concluding portion of his comment (*op. cit.* : 40) (Author's translation) was as follows :—

> The ultraspecies sensu Kiriakoff (1948) and Schilder (1952) is a very important taxon that seems to be indispensable for a phylogenetically minded systematic study. It has been sometimes confused with lower supraspecific taxa (e.g., sections or subgenera), which is an error because it belongs to the species-complex of which it is the highest category ; it differs from the lower supraspecific taxa in its composition, because it may include semispecies as well as full species, which is unthinkable with sections, subgenera and other supraspecific taxa.

6. As Mayr has pointed out (paragraph 2 above) superspecies are listed as such in monographs and catalogues. The recognition of the taxon under discussion has indeed become generalised, especially where Mammalia and Aves are concerned. It seems unnecessary to insist upon the latter fact, it being so well known. The concept of the superspecies has been less widely recognised by students in invertebrates. The following works are chosen from among those where the authors have accepted the so-called " Kiriakoff Scheme " (see paragraph 8 below) :—

Leipdoptera :	S. G. Kiriakoff, 1953
Rotifera :	A. A. M. Gillard, 1948 E. Bartos, 1955
Rhizopoda :	M. Stepanek, 1952

7. In view of progress in phylogenetically-minded research and, as one of the corollaries of that progress, the need for using finer taxonomic distinctions than those required in the past, the adoption of some special kind of notation seems inevitable. Huxley (1945 : 404 *et seq.*) discussed the matter at length and proposed a partial scheme for such notation. The superspecies was, however, omitted from the portion of that Scheme where special nomenclature was concerned.

8. Kiriakoff (1948a) proposed a more complete scheme—the so-called "Kiriakoff Scheme" (vide C. L. Remington, 1948 : 16). As far as the superspecies (then called ultraspecies by Kiriakoff) is concerned, the suggestion put forward was as follows (*loc. cit.* : 15) :—

> 3. *Ultraspecies.*—named binominally ; the name used is that of the first described form, preceded by a capital "U". The name of each form included in an ultraspecies is written following the name of the first described form in the complex. The prior form is placed in ordinary parentheses—( )—if the included form is a race or semispecies, and in square brackets—[ ]—if it is a good species.

9. As has already been explained, the expressions "superspecies" and "ultraspecies" are not strictly synonymous, as defined by Mayr and Kiriakoff respectively, the latter expression applying to a broader concept. However, in order to simplify matters and taking into consideration the fact that most taxonomists recognise the former of these concepts, it has been thought desirable—on the advice of Professor E. M. Hering—to drop the expression "ultraspecies" in favour of the expression "superspecies". We are encouraged to take this view by the provision that "The Rules do not trespass upon the freedom of taxonomic thought" incorporated in the Draft of the Revised *Règles* (1957, *Bull. zool. Nomencl.* **14** : 33). Any taxonomist is free therefore to use the expression "superspecies" in whatever sense he may consider best.

Recommendations

10. For the reasons set forth above I recommend that the International Commission on Zoological Nomenclature should propose to the International Congress of Zoology that the concept "superspecies" should be recognised in the *Règles* at the same time that the concept "semispecies", as to which a separate application is being submitted—is so recognised. The action which we recommend should be taken to give effect to the foregoing proposal is as shown below. The Article and page numbers cited are those in Volume 14 of the *Bulletin of Zoological Nomenclature*, the volume containing the Draft of the Revised *Règles*.

Suggested modifications in text of Draft "Regles"

(1) *Article* 4, *Section* 2, *line* 7 :

> Substitute "species and superspecies" both in the title and in the text in this line. [In view of the fact that "superspecies" is an optional category only, it is suggested that in these passages the word "species" should appear in front of, and not after that word.]

(2) *Article* 4, *Section* 2, *line* 10 :

Substitute "Example of a designation for a species" for "Example".

(3) *Article* 4, *Section* 2, *new line to follow line* 10 :

Insert the following :—

Examples of designations for superspecies :

Dicrurus [*hottentotus*][1]

Note :—The above is the designation to be used when it is desired to cite the superspecies as a whole.

Dicrurus [*hottentotus*] *hottentotus*

Dicrurus [*hottentotus*] *montanus*

Note :—In the above example the names *hottentotus* and *montanus* are the specific names of the species of which the superspecies is composed.

(4) *Article* 4, *Section* 2 (*Explanation*), *line* 17 :

Insert the following : "Similarly, the name of a superspecies is to be ignored for the purposes of the calculation prescribed in the present Section".

(5) *Article* 4, *Section* 3, *lines* 19–22 *and substitute the following* :—

Section 3. Subspecies and members of a superspecies: The designation of a subspecies and that of a member of a superspecies shall be trinominal (cf. preceding Explanation). I.R. Art. II.

Example of a name of a subspecies : *Campsomeris plumipes confluenta*

Example of a name of a member of a superspecies : *Dicrurus* [*hottentotus*] *hottentotus hottentotus*.

(6) *Article* 15, *Title, line* 2 :

Insert the words "members of a superspecies" between the words "species" and "subspecies"

(7) *Article* 15, *Section* 1(*a*) : Delete line 7 and the first four words in line 8 (to the word "subject" inclusive) and substitute the following :—

(a) Specific and subspecific names and names of members of superspecies : Specific and subspecific names and the names of members of superspecies shall be subject . . .

---

[1] See Vaurie (C.), 1949, "Revision of the Bird Family Dicruridae", *Bull. amer. Mus. nat. Hist.* **93** : 291 *et seq.*

(8) *Article* 15, *Section* 7, *between lines* 2 *and* 3 : Insert the following new Section which will become Section (a), and existing Section (a) (Subspecific names) becoming Section (b) :—

(a) Superspecific names : The designation of a superspecies shall consist of the binomen composed of (1) the generic name, followed (2) by the oldest available specific name belonging to any member of the superspecies, this latter name being placed within brackets ; any member of a superspecies may be cited under the above formula, with the addition thereto of the specific name of the said member.

(9) *Glossary, page* 283, *between* " *Super-Order* " *and* " *suffix* " insert the following :—

Superspecies : A Superspecies is a monophyletic group of sympatric and/or allopatric species which differ from each other morphologically or otherwise too much to be placed in a single species.

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CASE No. 58

DRAFT " RÈGLES ", ARTICLE 15 : PROPOSED INSERTION OF PROVISIONS RECOGNISING THE CONCEPT " SEMISPECIES "

(Commission Reference : Z.N.(S.) 1328)

DOCUMENT 58/1

Proposed insertion in the " Règles " of provisions recognising " semi-species as a special category for the classification and nomenclature of definite groups of taxa as now proposed to be defined

By

Z. LORKOVIC

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and

S. G. KIRIAKOFF

(*University of Ghent, Belgium*)

(Enclosure to a letter dated 3rd March 1958)

The purpose of the present application is to seek the grant of a formal status for a category of taxon first recognised nearly twenty years ago which has now become necessary in refined systematics.

2. The term " semispecies " was first proposed by E. Mayr (1940) for forms which :—

> " can be deduced to be geographical representatives of some other species, but have during isolation developed morphological differences of the order of magnitude to be seen between undoubted species."

3. In 1948, S. G. Kiriakoff somewhat broadened the concept of semispecies. He adopted the definition suggested by Mayr (quoted in paragraph 2 above) but made the following addition * :—

> " In order to give the semispecies the broader sense defined above, it will be sufficient to add that it comprises ' Biological ' as well as ' geographical ' representatives. One would indeed go further and use the word ' representatives ' without qualification."

4. Z. Lorkovic (1953) proposed the introduction of semispecies into systematics as a special category, defining it in 1955 as follows :—

> " There is more and more evidence recently that some allopatric and also some sympatric species, being incompletely reproductively isolated, mean a real transition between the geographic race and species. . . . For all such allopatric or partially sympatric forms, with incomplete physiological reproductive isolation, but which do not mate freely, the author introduces the name of semispecies. . . ."

5. Later (1957) Lorkovic completed the term " semispecies " by genetical characteristics, pointing out that in some semispecies some (or at least one) of the reproductive isolating mechanisms do not entirely prevent the gene exchange between neighbouring populations, and therefore a low but nevertheless noticeable percentage of hybrids in some parts along the line of contact results. The chorological (geographical) characteristics of the semispecies is allopatry with a sharp cline in the zone of contact, but in certain cases of strictly ecological and/or temporal isolation semispecies may be partly sympatric.

6. The above are all peculiarities on which even the most outstanding specialists in a group do not agree in the systematic evaluation of two or more forms, this fact being a good indicator for semispecies.

7. The category of semispecies is required in order thereby the better to define and point out the transitional stages in the speciation process, i.e. stages between subspecies and species, these being of such great importance in evolution. In this way the distinction between the concepts of species and subspecies can be avoided.

8. Kiriakoff (1948) and Lorkovic (1953) proposed independently a manner for designating a taxon of the semispecies category, namely, by the use of a trinominal term in which the name of the species would be placed in parentheses followed by the name of the semispecies. Example : *A-us* (*b-us*) *c-us*.

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* Authors' translation.

9. Recommendations : In view of the facts and considerations set out above we now formally request that the following additions be made in the *Règles* :—

(1) That the words " and of semispecies " be added at the end of Section 1 of Article 15 ;

(2) That the following entry lettered (a) be inserted before the existing item "(a) subspecific names " in Section 7 of Article 15 :—

> (a) Semispecific names.—The designation of a semispecies shall consist of a trinomen composed of (i) the generic name, followed by (ii) the specific name, placed between parentheses, and (iii) by the semispecific name.
>
> Examples : *A-us* (*b-us*) *b-us*
> *A-us* (*b-us*) *c-us*

(3) That the following definition of the term " semispecies " be inserted in the " Glossary " :

> " A semispecies is an intraspecific category presenting a transition between subspecies and species ; like the former, semispecies are allopatric but with a sheer cline in the zone of contact (if any such exists) on account of the very restricted but nevertheless noticeable occurrence of hybrids along the line of contact due to the incomplete reproductive isolation between semispecies ".

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CASE No. 59

DRAFT "REGLES", ARTICLE 12; QUESTION WHETHER THE CATEGORY "SUPERFAMILY" SHOULD BE TREATED AS BELONGING TO THE FAMILY-GROUP OR TO THE ORDER-GROUP AND OF THE CATEGORIES WITH WHICH IT SHOULD BE TREATED AS CO-ORDINATE

DOCUMENT 59/1

Proposal for the transfer of Superfamily names to the Order/Class group

(Commission Reference : Z.N.(S.) 1358)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

The XIII International Congress of Zoology, Paris, 1948, directed the Secretary of the International Commission to give special consideration to seven problems of zoological nomenclature involving the clarification, amendment or expansion of the *Règles* so that these could be discussed by the XIV International Congress, Copenhagen, 1953. One of these problems concerned the formation of the names of " families and subordinate categories of supra-generic rank " and the exhaustive treatment given to this problem by the Secretary in his report (Hemming, 1952, *Bull. zool. Nomencl.* **7** : 61—94) covered, in paragraphs 39—42 of this paper (*op. cit.*, pp. 89—90), the question of the names of superfamilies.

2. In the first of the paragraphs referred to, the Secretary remarked "At first glance it might be thought more appropriate to treat superfamily names as representing the lowest unit in the group of categories comprised in the ' ordinal ' group, rather than as a kind of upward extension of the group of categories belonging to the ' family ' group. On closer inspection, however, it becomes apparent that, in fact, superfamily names are much more closely related to family names than they are to names of the ordinal group, being based invariably upon the stem of the name of a genus which is already the type genus of one of the families included in the superfamily concerned. It

is accordingly suggested that the revised scheme relating to the naming of families should include also those provisions relating to the naming of superfamilies ". In paragraph 41 he went on to say " No doubt in most cases authors publishing new superfamily names have formed the superfamily name in question on the basis of the name of the longest established of the families placed in the new superfamily, but it is possible that for one reason or another this course has not always been followed. Moreover, even where this course has been adopted by the author of a superfamily name, it does not follow that the family on the name of which the superfamily name is based will always remain the oldest established family comprised in the superfamily so established, for the boundaries to be assigned to a superfamily are essentially a matter for the subjective judgment of systematists and in the nature of the circumstances represent a concept, the content of which must be liable to change in accordance with changing taxonomic ideas. It follows therefore that a rule which required that the name of a superfamily must be based upon the stem of the name of the type-genus of the longest established of the included families might give rise to instability in the names of superfamilies. This is something which should clearly be avoided. It is accordingly suggested that the names of superfamilies shall be co-ordinate with the names of families. It is suggested that this latter rule should be qualified by a proviso that superfamily names shall rank for priority, *inter se*, by reference to the dates on which they were severally published as such and not by reference to the relative priority of the names of the families comprised in the superfamily concerned ".

3. Attention has been drawn to the Secretary's remarks quoted above because it is clear that he realised that, while the names of superfamilies are closely related to the names of other family-group categories, the concept is, in at least some fields of zoology, nearer to an order-group concept than to a family-group one. This is especially true in groups such as the ammonites and belemnites, which were for long comprised within a single nominal genus and whose growth to ordinal status has taken place in the last hundred years. In such groups as these the lack of categories between family and suborder has always presented taxonomic difficulty. It is possible that in other groups, such as the insects, where from the earliest times of Linnaean taxonomy recognition was given not only to many genera, but to several categories of order-group rank, the concept of the superfamily has been of a unit in the family-group, but I cannot believe that, even if this is the case, specialists in these groups welcome the introduction of the kind of instability to which the Secretary drew attention.

4. The origin of this instability lies in the fact that, when the Copenhagen Colloquium included the superfamily category in the family-group, it ruled (*Copenhagen Decisions* : 33, para 46) that " names applied to units belonging to the family-group of categories shall be co-ordinate with one another, that is to say, for purposes of priority, a name published for a unit in any category in the family-group and based on a particular type-genus shall date from its original publication for a unit in any category in the family-group and shall retain that priority even if that unit is subsequently treated as belonging to a higher or lower category in the family-group ". In so deciding, the Copenhagen Colloquium not only ignored the advice of the Secretary, but it also set aside the opinions of two of the specialists who replied to the Secretary's appeal for advice on problems concerned with the formation of names for units in the family-group of categories. These were Mr. L. Bairstow (*Bull. zool. Nomencl.* **8** : 205—206), a specialist in belemnites ; and Dr. F. A. Urquhart, conveying the views of the scientific staff of the Royal Ontario Museum of Zoology and Palaeontology (*ibid.* : 203—204). In both these contributions it was urged that superfamily names should rank for priority among themselves, without reference to the relative priority of the names of the included families. The same problem is discussed in a letter from Dr. G. Henningsmoen reproduced as Annexe 1 to this document.

5. The Copenhagen Decision referred to has been held to imply that every family name calls into existence a notional superfamily name, but this implication is neither logical nor practical. The practical difficulties have already been indicated. Logically, if every nominal family were to be promoted to superfamily status, the problem of priority as between one category and the other would disappear, so that the contingency provided for can never in fact occur.

6. The late Dr. W. J. Arkell (Treatise of Invertebrate Paleontology, *Geol. Soc. Amer.*, Part L, 1956) changed four names of ammonite superfamilies in accordance with Copenhagen Decision 46, as follows :—

Crioceratitaceae Wright, 1952 to Ancyloceratаceae Meek, 1876
Hamitaceae Hyatt, 1900 to Turrilitaceae Meek, 1876
Harpocerataceae [*sic*] Neumayr, 1876 to Hildocerataceae Hyatt, 1867
Oppeliacea [*sic*] Bonarelli, 1894 to Haplocerataceae Zittel, 1884.

At least the last two of these changes may be regarded as undesirable disturbances of current usage.

7. There are four courses open to the London Colloquium when considering the present problem. The first would be to leave things as they are ; this would be undesirable because of the actual and potential instability of nomenclature thus caused. The second would be to transfer the category superfamily to the order-group ; this would obviate the need to change many existing superfamily-names to confrom with the name of the oldest currently included nominal family, but it would bring superfamily-names into competition with order-group names for the purposes of priority. Since, however, order-group names are not generally based on the stem of the name of an included genus, and since, in the groups where these names are so formed, the category superfamily is not in every case currently employed, the risk of confusion is small. The third course would be to create an independent category for superfamilies and to declare that their names are not co-ordinate either with names of the family-group or with names of the order-group ; the extent to which the category superfamily is used, however, probably does not justify such heavy-handed treatment. The fourth course would be to rule that the names of superfamilies, while still to be regarded as belonging to the family-group, are to rank for priority among themselves alone, without reference to the relative priority of the family names concerned. The result of this course would be to abolish the co-ordinate status of superfamily names vis-à-vis other names in the family-group, at least in the sense in which the term " co-ordinate " was defined by the Copenhagen Colloquium and in which it is used by Professor Bradley in his " Glossary " (*Bull. zool. Nomencl.* **14** : 274). The adoption of this suggestion might therefore be felt to introduce an undesirable inconsistency into the harmony of existing arrangements within the family-group.

8. It is therefore held that the course which will contribute most to stability of existing nomenclature and cause the least interference with current practice would be to transfer the category superfamily from the family-group to the Order/Class-group. Consideration of the alterations to Professor Bradley's draft *Règles* which would be required if this course were adopted has revealed certain defects in the drafting of Article 12 which ought in any case to be amended, whether the proposals now to be submitted concerning superfamily names are approved or not.

9. The first defect in the drafting of Article 12 is that the range and content of the phylum-group and the class- and order-group are nowhere defined in that article. These groups were defined by the Copenhagen Colloquium (*Copenhagen Decisions* : 38, para 60), and it is therefore proposed :—

(i) that a new paragraph be included in Article 12, Section 1 of the draft English text of the *Règles* defining the groups covered by that Article as follows :—

> (a) the phylum-group is defined as including all categories from subphylum upwards. The class-order group is defined as including all categories from superfamily to superclass inclusive. *Cf.* C.p.38. par. 60.

The paragraph now numbered (a) would then be numbered (b) and that now numbered (b) would be numbered (c).

10. Next, if the superfamily category is to be transferred to the Order/Class-group, it is necessary to define its relationship to the other categories included in that group from the point of view of the Principle of Priority. It will obviously be desirable that current practice whereby the names of superfamilies are formed from the stem of the name of the genus which is the type genus of one of the included families should be perpetuated. The question of the co-ordinate status of superfamily names vis-à-vis names in other categories in the class- and order-group must, however, be treated in the same way in those fields where ordinal names are formed from the stem of the name of an included genus and in those fields where this is not the case. In cases of the former kind, it is possible that nominal suborders or orders may exist, the names of which do not accord with the names of any of the superfamilies referred to the suborder or order concerned, although this is perhaps unlikely to be often met with, since suborder and order names formed in this manner are usually formed on the basis of the names of well-known genera that are already the type-genera of nominal families. In any case, it is felt that it would be best for superfamily names on the one hand and suborder and order names on the other hand to be independent for purposes of priority ; for in most groups ordinal categories as such have been introduced long prior to the introduction of superfamilies, and it would be undesirable to give superfamily names a greater—in many cases perhaps a much greater—degree of priority than properly belongs to them by making them co-ordinate with ordinal names formed from the name of the same nominal genus. It is therefore proposed to add a new paragraph (d) to Section 1 of Article 12, as follows :—

(d) Superfamily Names

(i) No superfamily name, of whatever date, shall be an available name under the Law of Priority unless its name be formed from the stem of the name of a genus which is also the type-genus of one of the nominal families included in the superfamily concerned at the time when it was first established.

(ii) The names of superfamilies shall rank for priority among themselves, by reference to the dates on which they were severally published as such and not by reference to the relative priority of the names of the families comprised in the superfamily concerned. Further, their priority shall be decided without reference to the relative priority of the names of any units belonging to higher categories with which they are associated on taxonomic grounds, however the names of these higher units may be formed.

11. The transfer of the superfamily category to the class- and order-group if accepted, will necessitate certain minor amendments to the later sections of draft Article 12, as follows :—

Section 2, p. 93, line 5. For " of a rank above superfamily " read " of the class- and order-group or of the phylum-group ".

Section 3(a), p. 93, line 19. For " of a taxon above superfamily " read " of the class- and order-group or of the phylum-group ".

Section 3(b), p. 93, line 25. For " belonging to a category above superfamily " read " of the class- and order-group or of the phylum-group ".

Recommendation, p. 94, line 8. For " above superfamily " read " of the class- and order-group or of the phylum-group ".

12. Lastly, if the transfer of the superfamily category to the order-group is approved, it will be necessary to amend Section 1 of Article 13. It is therefore proposed :—

(i) that Section 1 of Article 13 of the draft English text be amended by the deletion of the word superfamily in the third line of paragraph (a) of that Section (p. 95, line 6).

Annexe 1 to Document 59/1

Extract from letter dated 3rd September 1955 from

Dr. **GUNNAR HENNINGSMOEN,** Paleontologisk Museum, Oslo

According to paragraph 46 in the Copenhagen Decisions, the author of the first-published valid name for any taxon in the family-group (tribe, subfamily, family, superfamily) is held to be the author of all other taxa in this group which are based on the same nominate type, and the date of publication for purposes of priority is that of the first-published name. Superfamilies have from time to time been based on the same nominate type as the three trilobite families CONOCORYPHIDAE Angelin, 1854, PTYCHOPARIIDAE Matthew, 1887 and OLENIDAE Burmeister, 1843. If the three families are regarded as belonging to the same superfamily, does it mean that Olenacea Burmeister, 1843 automatically becomes the name of the superfamily, even if a superfamily Olenacea was recognized much later than a superfamily Conocoryphacea ? (Assuming that no superfamily had been based on the same nominate type as a family of this group erected before 1843, and apart from the question of the termination of superfamily names). And does paragraph 46 mean that anybody even from now on can change the name of a superfamily simply by " erecting a superfamily " based on the same nominate type as, e.g. a family which is " older " than that of the family based on the same nominate type as the superfamily (provided that this is not, by chance, the oldest) ? To take an example : if there had been a family XYZidae Smith, 1842 included in the Olenacea,could I change the name of the superfamily to XYZacea Smith, 1842 simply by stating that I regarded XYZacea as a superfamily ? If so, it seems as if names of superfamilies for a long time will be rather unstable.

CASE No. 60

DRAFT "REGLES", ARTICLE 28, SECTION 4: NAMES PUBLISHED WITH DIACRITIC MARKS OVER INDIVIDUAL LETTERS

(Commission Reference: Z.N.(S.) 893)

DOCUMENT 60/1

Report on communications received since the Copenhagen (1953) Congress on the question of the practicability of inserting additional letters in words in place of diacritic marks

By

FRANCIS HEMMING, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Report dated 19th May 1958)

The present Report is concerned with the problems arising in connection both with the use and with the non-use of diacritic marks over letters in zoological names. The question of principle involved in this matter was considered by the Copenhagen Congress in 1953 and certain broad conclusions were then reached. With the exception of a decision regarding the treatment to be accorded to the German Umlaut, no decisions were taken however by the Copenhagen Congress as to the treatment to be given to individual diacritic marks. On this subject the Commission was invited to make enquiries and to furnish a Report. The task involved has proved much more difficult than it appeared at Copenhagen, in this respect resembling the somewhat similar problem presented by the Latinization for the purposes of zoological nomenclature of words normally written in Cyrillic characters[1], on which also the Copenhagen Congress called for a Report from the Commission.

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[1] See Case No. 26, pp. 557—570 of the present Volume.

2. The Copenhagen International Congress of Zoology decided to delete from the *Règles* the provisions in Article 20 (of the existing *Règles*) prescribing the use of diacritic marks over letters in zoological names in cases where the words of which those names were composed carried such marks prior to being Latinized for use in zoological nomenclature and in its place inserted a twofold provision as follows :—

(a) Diacritic marks are not to be used in the formation of zoological names.

(b) Where a letter comprised in a zoological name bore a diacritic mark when that name was first published, that mark is to be represented by a combination of letters to be prescribed in a Schedule to be annexed to the *Règles*.

3. It was evident from the outset that the subject was one which could be dealt with only in a piece-meal fashion, alphabet by alphabet. It was found that in the case of some alphabets containing letters bearing diacritic marks there already exist recognized combinations of letters for use in place of the diacritic marks concerned. In these cases all that is required is that these equivalents should be collected, the list so constructed being incorporated in a Schedule annexed to the *Règles* as agreed upon at Copenhagen. In the second group of alphabets there exist no recognized equivalents for the diacritic marks concerned, and from the evidence collected it seems very doubtful whether it would be practicable to devize a generally acceptable scheme. These problems are discussed separately below.

(1) Diacritic Marks for which equivalents exist which it is recommended be now inserted in the list to be incorporated in a Schedule to the "Règles"

4. The Danish, German and Swedish alphabets all include letters bearing diacritic marks for which equivalents consisting of combinations of letters are commonly recognized. It is recommended that these equivalents be listed in the Schedule to be annexed to the *Règles* as the equivalents to be used when such diacritic marks have been used in the forming of a zoological name.

(a) Danish alphabet

5. The Danish alphabet contains three letters bearing diacritic marks. As regards these Professor Dr. Jakob Nielsen, Secretary to the Kongelige Danske Videnskabernes Selskab of Copenhagen has reported (*in litt.*, 10th February 1956) that there are recognized equivalents and that their use in place of the diacritic marks concerned would be unlikely to lead to any difficulty :—

Danish letter bearing a diacritic mark (1)	Generally accepted equivallent of letter in Col. (1) (2)
Œ	ae
Ø	oe
å	aa

(b) German alphabet

6. In the case of the German alphabet it is necessary to consider only the Umlaut, for which fortunately there is a long-established equivalent. It is accordingly recommended that the following entries be made in the proposed new Schedule to the *Règles* :—

German letter bearing a diacritic mark (1)	Generally accepted equivalent of letter in Col. (1) (2)
ä	ae
ö	oe
ü	ue

(c) Swedish alphabet

7. The Swedish alphabet contains three letters bearing diacritic marks. As regards these Dr. Arne Westgrau has reported (*in litt.*, 25th June 1956) on behalf of the K. Vetenskapsakademiens, Stockholm that there are well-recognized equivalents which could appropriately be used for the present purpose. The letters concerned and their recognized equivalents are the following :—

Swedish letter bearing a diacritic mark (1)	Generally accepted equivalent of letter in Col. (1) (2)
å	o
ä	ae
ö	oe

(2) Diacritic marks for which no recognised equivalents exist

8. Two communications were received commenting on the portion of the Copenhagen Decision which provided for the arbitrary insertion of specified additional vowels to signify given diacritic marks in cases where there are no currently accepted equivalents for the diacritic marks in question. The first of these communications (which was dated 26th August 1955) was from Professor Dr. Tadeusz Jaczewski writing on behalf of the Section of Biological Sciences of the Polish Academy of Science, Warsaw. The second was from Mr. P. J. M. Geelan of the Permanent Committee on Geographical Names for British Official Use. In making this communication Mr. Geelan stressed the fact that the opinions expressed in it were his personal views only, the question at issue not having been considered by, and indeed one falling outside the terms of reference of, the above Committee.

9. Professor Jaczewski and his colleagues in Warsaw expressed the view that the insertion of additional letters in particular words to indicate the presence of diacritic marks would disfigure often beyond recognition the original zoological name ; in the case of most of the alphabets concerned the difficulties involved in preparing the proposed Schedules would be virtually insurmountable ; the insertion of additional vowels in the manner proposed at Copenhagen would be manifestly counter to the orthographic rules in force in the languages concerned, and doubt was expressed as to the propriety and indeed the practicability of the International Congress of Zoology introducing special rules of this sort. Professor Jaczewski and his colleagues concluded that in the aggregate the foregoing objections were so formidable that it would be less objectionable to ignore diacritic marks and to print words as though none of the letters comprised in them bore such marks. Professor Jaczewski and his colleagues were however unable to support this latter course and recommended therefore that the London Congress should accept a modified scheme under which diacritic marks would be recognized in principle but provisions would be added which, it was hoped, would render the scheme reasonably practicable. Dr. Jaczewski's letter is attached to the present Report as Appendix 1.

10. Mr. Geelan, after passing the principal aspects of the problem under review expressed the opinion that the whole idea of the transliteration of Roman-alphabet languages was unwise. In his view the rendering, for example, of an accented Czech word by an English equivalent would be a most retrograde step. Mr. Geelan's letter (which was dated 13th November 1955), is attached to the present Report as Appendix 2.

(3) Underlying Difficulties

11. I am bound to observe that the technical objections to the arbitrary interpolation of vowels to indicate diacritic marks and the practical difficulties inherent in the construction of any such scheme now appear to be so serious as to render impracticable this approach to the diacritic-marks problem. This applies, in my view, not only to letters bearing diacritic marks in alphabets where there are no established equivalents but also to letters belonging to alphabets where well recognized equivalents are in existence. For very naturally those equivalents have been evolved independently by the peoples using those alphabets, the result being that a given combination adopted as an equivalent for some letter bearing a diacritic mark in one language may be adopted—and in some cases at least has been adopted—as the equivalent of a different such letter in some other alphabet. Thus, even in the small number of cases analysed in paragraphs 5 to 7 above we find that the letters " ae " are the Danish letter " Œ ", the German " ä " and the Swedish " ä ". Similarly the letters " oe " are the currently accepted equivalent for the Danish " ø ", the German " ö " and the Swedish " ö ". We see therefore that the adoption for the purposes of zoological nomenclature of the equivalents currently accepted for the above letters in the countries concerned would at once create a situation of " false homonymy " at what may be termed the " equivalent-name " basis. Accordingly, the adoption of these equivalents, while overcoming the difficulties involved in printing diacritic marks, would have failed to put an end to the danger that situations of false homonymy might arise through the omission of a diacritic mark. On the other hand, the adoption of a policy totally to disregard diacritic marks would, I think, be open to strong objection. In this connection I feel it of value to recall an interesting letter which I received in 1951 from Professor Dr. E. M. Hering (*Zoologische Museum der Humboldt-Universität zu Berlin*) when the present issue arose in connection with the individual names *Törnquistia* Reed, 1896 (Class Trilobita) and *Tornquistia* Paeckelmann, 1930 (Class Brachiopoda), for in this letter which is reproduced as Appendix 3 to the present Report such words, apart from being names of different individuals, may differ in both pronunciation and in meaning.

(4) Possible Solutions

12. For the reasons set out above it appears to me that the solution of the difficulties presented by diacritic marks advocated by the Copenhagen Congress is unsatisfactory, the difficulties involved in its application being now seen to be much greater than was then supposed. In my view therefore it is necessary now to look elsewhere for a method for dealing with this problem. Broadly speaking, there are only three ways by which this matter could be settled, namely :—

(1) A provision directing that diacritic marks are to be totally disregarded, in the sense that, if a name is published with such a mark, that mark is to be omitted by later workers without the insertion of any letter to indicate the former existence of the diacritic mark.

(2) The provision in Article 20 requiring the use by subsequent authors of diacritic marks whenever these were used when a name was first

published which was deleted by the Copenhagen (1953) Congress might be restored.

(3) It might be possible to devize some scheme somewhat intermediate in character between (1) and (2) above which in addition escaped the difficulties inherent in the Copenhagen Plan.

13. It seems to me that the objections both to (1) and to (2) are so great as to rule both out of court for practical purposes. Course (1) is not only incorrect but would, in addition, lead to the most anomalous results, while Course (2), though avoiding the actual errors inherent in Course (1), involves such serious difficulties from the point of providing the required type as to render its adoption impracticable from the printing point of view.

14. I conclude therefore that what is required is some compromise solution which would avoid the major disadvantages and inaccuracies inherent in (1), while avoiding also the practical difficulties inherent in (2). With these considerations in mind, I submit the following tentative proposals for consideration :—

(1) Where a name is published without a diacritic mark although the word of which that name is composed bore such a mark prior to being so Latinised, the spelling used by the original author is to be retained and is not to be subject to emendation on the ground that the diacritic mark was either omitted or was not represented by the insertion of an additional vowel.

(2) Where a name is published with a diacritic mark over one or more of the letters comprised in the word of which it is composed, (a) the name concerned is not to be treated as a homonym of an otherwise similar word published without a diacritic mark, but (b) it shall not be obligatory for later workers to employ the diacritic mark in connection with the word concerned in cases where to do so would involve printing difficulties.

15. The advantage of the foregoing suggestion, as it seems to me, is that it avoids the error involved in ignoring the difference created by the presence or absence of a diacritic mark, while at the same time avoiding the almost insuperable difficulties which arise except in a limited number of large centres. The foregoing scheme, if approved, would naturally find its place in Section 4 of Article 28 of the Draft of the English Text of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 201). What would be required would be the deletion of the existing Section 4 (a) and its associated sub-section (i) (i.e., all the words which now appear on lines 15 to 26) and the insertion in their place of provisions on the lines outlined above (paragraph 14).

APPENDIX 1

The problem raised by diacritic marks over letters in words when used as zoological names

By **TADEUSZ JACZEWSKI**

(*Polish Academy of Sciences, Instytut Zoologiczny, Warsaw, Poland*)

(Letter dated 26th August 1955)

I think that the question of diacritic marks is not so easy to dispose of as it was taken in Copenhagen Decision 101 (1953, *Copenhagen Decisions zool. Nomencl.* : 57–58).

In connection with the letter of the Secretary to the International Commission on Zoological Nomenclature, of April 22nd, 1955, ref. No. Z.N.(S.) 310, the Polish Group for questions of zoological nomenclature studied the matters involved, reported them to the Secretariat of the Section of Biological Science of the Polish Academy of Science, and has been authorised by the Secretariat of that Section to express the following opinion :—

(I) As to the transliteration of words normally written in Cyrillic characters, for the purpose of forming zoological names, the Group does not feel competent to express an opinion since in the Polish language the Latin alphabet is in use. The Group approves, however, the relevant remarks made by Prof. Dr. T. Jaczewski in his letter to the Secretary of the Commission of April 29th, 1955, ref. No. 1081/55/P.II.

(II) As to the use of diacritic marks in words used as zoological names the Group would like to express the following opinion :—

(a) The text of art. 20 of the Rules should be amended as follows : " In forming names derived from languages in which the Latin alphabet is used, the exact original spelling, including *in principle* diacritic marks *as well* is to be retained. Examples . . ."

(b) The following two additional paragraphs should be introduced in art. 20 of the Rules :—

(i) Authors of new zoological names are strongly invited not to form such names from words, either patronymics or other, which are written with the use of diacritic marks.

(ii) Authors, editors and other persons concerned are authorised to omit in zoological names diacritic marks when these would entail technical difficulties in printing, provided that such an omission does not result in homonymy with other zoological names ; the German " umlauts " should be replaced in cases of such technical difficulties by the double letters *ae*, *oe*, and *ue*. Such omissions of diacritic marks are not to be treated as emendations of the names in question.

(c) It seems that the proposed emendation of, and addition to the present text of art. 20 of the Rules will be a reasonable and practical way out of the existing difficulties.

(d) The proposed addition of supplementary letters to replace diacritic marks, as provided in the Copenhagen Decision No. 101, would cause very serious difficulties, of which the principal ones would be the following :—

(i) Additional letters will disfigure completely, often beyond recognition, the original word from which the given zoological name was derived.

(ii) There will be no means of distinguishing these additional letters from those belonging to the original spelling of the word from which the name in question was derived, unless they are printed in different types, taken into brackets, or set off by some similar method.

(iii) There will be unsurmountable difficulties in the preparation of the required schedules, since only very few cases will be as simple as that with the German " umlauts " ; a very difficult case will be presented for instance by the French vowels with their three different accents, etc.

(iv) The addition of supplementary letters instead of diacritic marks will be manifestly contrary to orthographic rules in force in the various languages ; it seems to be a matter of serious doubts whether the International Commission on Zoological Nomenclature or even the International Zoological Congresses have the necessary authority, and whether it is advisable that they should interfere with these rules which are officially accepted by competent scientific bodies and governments in the various countries, and which form, as is commonly felt, an essential element of the national culture. It seems, moreover, to be indisputable that a simple omission of diacritic marks interferes less, and in a less obvious and more " passive " way, with the various orthographic rules in question, than the " active " addition of supplementary letters.

(e) It should be remembered also that zoological names in which diacritic marks are used are derived mostly from modern patronymics and were introduced in zoological nomenclature as a rule to honour or to commemorate some person. It seems quite obvious that any disfiguration of the corresponding patronymic would be a very doubtful mode of honouring or commemorating the person in question. It seems to be also unquestionable that a simple omission of diacritic marks will disfigure a given name less than the insertion of additional letters.

(f) It should be also remembered that at least generic and specific names are as a rule followed in zoological publications by either full or abbreviated names of their authors, in which diacritic marks are often encountered as well. In this case any attempt to replace these diacritic marks by addition of supplementary letters should be regarded as absolutely inadmissible for it would be most misleading in matters of bibliographical references. It seems thus that even the adoption of the proposition expressed in the Copenhagen Decision No. 101 would practically help little in technical matters.

Accepted unanimously at the meeting of the Polish Group for questions of Zoological nomenclature on June 4th, 1955.

APPENDIX 2

On the question of the treatment of diacritic marks for the purpose of zoological nomenclature

By **P. J. M. GEELAN**

(*London*)

(Letter dated 13th November 1956)

Apart from what I believe to be the inherent undesirability of "transliterating" roman alphabets there are two practical difficulties to be faced. The first is that all the European roman-alphabet languages (except English, Dutch and Italian) make extensive use of diacritics, but not all of them in the same way or to fulfill the same functions: this means that you would need a set of "transliteration" rules for each language. For example, you refer in your letter to the easy solution to the German umlaut problem. Presumably this involves the writing of ae, oe and ue for ä, ö and ü respectively, and I agree that this is a perfectly satisfactory and workable convention. The same convention, however, cannot easily be applied to Swedish ä without confusion with Danish ae; it cannot satisfactorily be applied to Finnish ä and ö since these vowels also occur doubled as ää and öö, and to write these as aeae and oeoe is clumsy in the extreme; it cannot be applied in the same way to Hungarian ö and ü, which have corresponding long forms ő and ű, except by some such trick as pairing them oe/ooe and ue/uue; it cannot be applied comfortably to Estonian ö without distorting the connection between this letter and Estonian õ. Furthermore, it must be borne in mind that devising ways of transliterating umlaut would be simplicity itself compared with the distinguishing of French e, è, é and ê, Portuguese ó and ô, Rumanian a and ă, Czech u, ú and ů, Polish e and ę, Latvian a and ā, Lithuanian u and ų, Swedish a and å, Turkish ı, i and İ, Albanian e and ë.

While the transliteration of diacritic-bearing consonants would not present the same degree of difficulty as the vowels there would nevertheless be many problems. For example, while Croat č could probably be rendered ch without risk of ambiguity Czech č could not be so rendered since ch already exists in the Czech alphabet as a digraph with the sound of ch in English loch. Again, while Polish ż could conveniently be rendered as zh (the usual convention for the sound of j in French jour) it is difficult to see what could be done with Polish ź, which represents an intermediate sound between z and ż. Again, while Croat đ is, even in Croat itself, often written conventionally as dj or gj, there is no easy solution to the transliteration of Maltese ħ.

I do not at all deny the theoretical possibility of an unambiguous system for transliterating all diacritic-bearing letters in those European languages involved in zoological nomenclature, but its application would lead to something little short of chaos, a state of orthographic anarchy in which Shtyedrzhik for Štědřík might be the least remarkable of metamorphoses.

The second practical difficulty facing the Congress is that of getting international agreement to a system of "transliteration". The attainment of uniformity in the romanization of a single language within one organization in one country is never an easy matter; the prospects of finding any accord on the transliteration of perhaps a dozen languages among a dozen or more countries are not likely to be very bright. To take just two of the letters for which an agreed transliteration would have to be found:- Czech š (which is pronounced as the sh in ship) represents a sound that would normally be written as SH in English, CH in French, SCH in German, SJ in Swedish, SC in Italian, S in Hungarian; Croat dž represents a sound (that of j in jug) which is normally written J in English, DJ in French, DSCH in German, Y in Spanish, C in Turkish, DZS in Hungarian, XH in Albanian. My own experience of these things is that even if international agreement is obtained in principle on one or other symbol of transliteration it will not be long before national bodies fall back on a qualified use of their own orthographical conventions.

I have deliberately dealt with the extremes of the problem facing you, and much of it may well be more easily susceptible to solution than my remarks would indicate. Nevertheless, however easy agreement might be, I remain convinced that the whole idea of the transliteration of roman-alphabet languages is unwise. It will be found unsound in principle, unsatisfactory in practice, and will certainly be detrimental to the progress that has been so hardly won over the decades of this century for the recognition and acceptance of the roman-alphabet rule, i.e. the use of all roman alphabets in their native form complete with diacritics.

I agree that the omission of diacritics when these cannot be typed or printed may lead to ambiguity and invalid homonyms, but I cannot believe that these will be numerous in practice. A far simpler solution to the problem, in my opinion, would be to devise an additional set of rules for your International Code of Nomenclature which ensured that no new name be permitted which differed from an existing name only in the use of a diacritic, and which provided for the changing of those names which are at present liable to confusion on this account.

APPENDIX 3

On the relative status from the standpoint of the Law of Homonymy of names differing from one another in spelling through the presence in one case, and the absence in the other, of a diacritic mark

By **E. M. HERING**

(*Zoologische Museum der Humboldt-Universität zu Berlin*)

(Letter dated 11th August 1951)

(Reprinted from 1952, *Bull. zool. Nomencl.* **6** : 252)

In answer to your question whether generic names differing from one another only by the presence in one case and the absence in the other of a diacritic mark should be regarded as homonyms, I give you my opinion on the four points raised :—

(1) Words differing by reason of a diacritic mark possess in most cases a different pronounciation and mostly a different sense. Zoological names differing in this manner are derived from different words and should not be regarded as homonyms.

(2) The difference between two zoological names so created is sufficient to make them suitable for concurrent use in every case. It is not desirable that the *Règles* should provide that any pair of such names should be treated as homonyms of one another. (Törnquist means thorn-twig, Tornquist means literally tower-twig. In the Czechoslovak language r is spoken = r, but ř is spoken rsh and words differing in " r " and " ř " have a different sense !)

(3) In the example of " Müllleria " and " Mulleria " the diacritic mark is sufficient to distinguish the two names ; the difference points out also the difference between the grandfather and grandson !*

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* The reference here is to a question in my letter to Dr. Hering of 5th August 1951, regarding a hypothetical case in which a generic name *Müllleria* was based upon the name of a German zoologist and another generic name *Mulleria* without an umlaut based on the name of the foregoing zoologist's grandson who was an American citizen and who had discontinued the use of the umlaut. (Signed) Francis Hemming 5th February, 1952.

(4) In the present language use Tornquist cannot be regarded as a German name ; in the most cases one may assume that this is the surname of a man, the ancestor of whom came from Sweden. But there are so many names in German which were common to Germany and Sweden in older times that it may be that in parts of Germany there are to be found families bearing names identical or nearly identical with Swedish names. There are also many names in Sweden with alternative modes of spelling but with the same sense, especially the composita with twig ; -quist, -qvist, -kvist, etc. All these have the same sense and the same pronounciation, but zoological names derived from these composita cannot be regarded as homonyms of another. There is no other possibility than to use them as different zoological names, and the same must be binding for the names differing by reason of a diacritic mark.

CASE No. 61

DRAFT " REGLES " : RELATIONSHIP OF, TO DECISIONS BY PREVIOUS CONGRESSES

(Commission Reference : Z.N.(S.) 1364)

DOCUMENT 61/1

Criticisms of the style and content of the Draft of the English text of the " Règles "

By **K. H. L. KEY**

(*Commonwealth Scientific and Industrial Research Organisation, Canberra, A.C.T., Australia*)

(Letter to the Secretary dated 10th March 1958)

I have read with mixed feelings Professor Chester Bradley's draft International Code of Zoological Nomenclature as Amended by the Paris and Copenhagen Congresses (*Bull. zool. Nomencl.* **14** : parts 1–9). On the one hand I am conscious of relief that here at last is a consolidated presentation of all the numerous and varied amendments and additions to the old *Règles* enacted by the two zoological Congresses over a period of ten years. On the other hand, I feel that this draft is not the sort of thing I expected and wanted.

In trying to find the reasons for this rather unspecific yet strong sense of disappointment, I have arrived at the following general criticisms :

(1) The draft does not represent a " harvest " (in the terms of the President-designate of the London Congress) of the progress made at Paris and Copenhagen, but revives a number of issues thought to have been settled, and raises a great many new ones. There is no certainty that all of these can be finally decided at the London Congress, so that the draft as it stands exposes us to the danger of a further five years with no agreed Code. The new material could, however, be excised without leaving too-evident scars, a process that would be greatly facilitated by the comprehensive tabulation of these deviations prepared by Mrs. Ann Wilson of the Commission's secretariat and published as Document 24/1 in *Bull. zool. Nomencl.* **15** : parts 12/15.

(2) The draft comprises a completely new arrangement in which all the Articles of the old *Règles* are re-numbered. I would not regard this as a defect in itself, but the new arrangement does not seem to be an altogether happy or logical one. As a rather extreme example, repetition of the same provision under different headings in different parts of the Code seems to contravene the basic principles of good drafting.

(3) The style of the draft is didactic and interpretative—almost vernacular—instead of straightforward and precise. In places it reads almost like an introduction to the Code for beginners rather than the Code itself. In thus falling over backwards to achieve " simplification ", the compiler has obscured many fine but essential distinctions that were admirably drawn in the carefully chosen wording of the original Congress decisions. There are, however, several instances where the re-wording reveals a fundamental misunderstanding of a Congress decision. If this draft were accepted, it would be found that dozens of its provisions could only be interpreted by reference to the original Congress decisions.

If criticisms such as these are at all widely shared among the Members of the Commission and of the Colloquium on Nomenclature, it may be impossible to reach agreement in London on the basis of the Chester Bradley draft. For the criticisms cannot be met by minor drafting amendments : they strike too deeply at the foundations of the document. It is possible, therefore, that Congress members may be faced with the alternatives of approving a draft which, in spite of much modification, is fundamentally not what they feel the new Code should be, or of accepting the responsibility for deferring for another five years the promulgation of the Code.

What is badly needed is an alternative draft, drawn up in a different style and with a somewhat different objective, which could be presented to the Congress along with the Chester Bradley draft. The great difficulty in the way of this solution is the very inadequate time remaining, before the opening of the Congress, in which to prepare, publish, and consider such a draft. However, it occurs to me that some codification of the Paris and Copenhagen decisions must have been undertaken by the Commission's secretariat to enable it to deal with the great range of topics coming before the Commission in which those decisions have had to be taken into account. Is it possible that this could be worked up fairly quickly into a second draft that would retain broadly the old arrangement of the material and adhere much more closely both to the meaning and to the wording of the Congress decisions, while avoiding unnecessary legalism ? If so, I would like you to put a proposal along these lines to the Commission for immediate decision.

I need hardly say that a vote in favour of such a proposal would not constitute in any sense a vote against the Bradley draft, and could well be recorded by a Commissioner who enthusiastically supported the latter.

DOCUMENT 61/2

Reply by Mr. Hemming to Commissioner Key's criticisms of Professor J. Chester Bradley's Draft of the English text of the " Règles "

Letter dated 12th March 1958

The Draft of the Revised English Text of the " Règles " published in 1957 in Volume 14 of the Bulletin of Zoological Nomenclature

I write to acknowledge receipt of your letter of 10th March, in which, after advancing criticisms of the Draft of the Revised English text of the *Règles* prepared by Professor J. Chester Bradley and published in November last in Volume 14 of the *Bulletin of Zoological Nomenclature*, you enquired whether there was in existence in the Office of the Commission a working draft reflecting the decisions relating to the amendments to the *Règles* adopted by the Paris (1948) and Copenhagen (1953) Congresses, and asked that, if there was such a document, the Commission should be invited to authorise its publication in the *Bulletin* for consideration jointly with the Draft prepared by Professor Bradley.

In reply I have first to state that there is in existence a document prepared in this office in which the decisions taken by the Paris and Copenhagen Congresses have been strung together under the existing Article Numbers. This document, which we know by the title of the " Office Working Text ", was compiled for internal office use shortly after the close of the Copenhagen Congress, such a document having been found to be necessary for purposes of consultation in connection with day-to-day work on applications regarding individual names submitted by specialists for publication in the *Bulletin*. I should add, however, that this document is not at present quite complete, for it does not take account of the interpretative decisions taken by the Commission in *Declarations* adopted by the Commission since the close of the Copenhagen Congress.

I have carefully considered the proposals contained in your letter and I must tell you that the relevant decisions by the Copenhagen Congress—namely, Decisions 187–190 as recorded in the volume entitled *Copenhagen Decisions on Zoological Nomenclature* (: 96–98)—are concerned only with the preparation and submission by Professor Chester Bradley of a revised text of the *Règles* there being no mention of the possibility of any second draft being submitted. I accordingly take the view that, so far as the Copenhagen decisions are concerned, there is no authority for the submission to the Commission—and the publication in the *Bulletin of Zoological Nomenclature*—of a second draft compiled for different purposes and built up on different principles.

I recognise that my view in this matter is no more than that of a single individual and, although personally I do not doubt its correctness, I consider that this is a matter which ought not to be settled administratively by myself as Secretary but should be the subject of a decision by the Commission as a body. I feel it is my duty however to place my views on this subject before the Commission at the same time that it considers your letter to me of 10th March. I am accordingly arranging for the circulation to the Commission of copies of the present letter simultaneously with copies of your letter. At the same time a Voting Paper will be issued in which the Members of the Commission will be invited to state whether they accept my view on the procedural issue involved or alternatively whether they approve your proposal and accordingly direct that arrangements should be made by this Office for the publication as soon as possible in the *Bulletin of Zoological Nomenclature* of the document known as the " Office Working Text " referred to earlier in the present letter.

DOCUMENT 61/3

Action taken by the Office of the Commission on Dr. Key's Proposal

(Reference : Document 61/1)

By **FRANCIS HEMMING**

(*Secretary to the International Commission on Zoological Nomenclature*)

(Report dated 16th May 1958)

In accordance with the procedure set out in the last paragraph of my reply to Commissioner Key of 12th March 1958 (Document 61/2), a Voting Paper (V.P.(O.M.)(58)3) was issued on 14th March 1958, in which Members of the Commission were invited to vote either for, or against, " the proposal submitted by Dr. Key in the foregoing letter [i.e. in the letter dated 10th March 1958 reproduced above as Document 61/1] that the Secretary be instructed to arrange for the publication as soon as possible in Volume 14 of the *Bulletin of Zoological Nomenclature* of the document referred to in the above correspondence as the ' Office Working Text ', that is, the working draft of the *Règles* prepared in the Office of the Commission for internal office use shortly after the close of the Copenhagen Congress ".

2. Particulars of Voting : The Voting Paper (V.P.(O.M.)(58)3) referred to above was issued under the One-Month Rule and the Prescribed Voting Period therefore closed on 14th April 1958. During the period in question the membership of the Commission amounted to twenty-four. As one Commissioner (Miller (A.H.)) was on Leave of Absence, the effective voting strength of the Commission was then twenty-three. At the close of the Prescribed Voting Period it was found (a) that eight (8) Commissioners (Holthuis ; Lemche; Key ; Jaczewski ; Mertens ; Hankó ; Riley ; Kühnelt) had voted in favour of the above proposal, (b) that thirteen (13) Commissioners (Bodenheimer ; Sylvester-Bradley ; Hering ; Mayr ; Vokes ; Prantl ; Stoll ; do Amaral ; Cabrera ; Bonnet ; Tortonese) had voted against the above proposal ; (c) that two (2) Commissioners (Bradley (J.C.) ; Hemming (F.)) had abstained from voting, and (d) that two (2) Commissioners (Dymond ; Boschma) had not returned their voting papers. [Later, negative votes were received from Commissioners Dymond and Boschma.]

3. Declaration of Result of Vote : On 15th April 1958, the day following the close of the Prescribed Voting Period, I signed a Certificate, as Returning Officer for the vote taken on Voting Paper V.P.(O.M.)(58)3, that the votes cast were as set out in paragraph 2 above and declaring that the proposal submitted with the foregoing Voting Paper had been rejected by eleven (11) votes to eight (8) votes with two (2) abstentions and that the decision so taken was the decision of the International Commission in the matter aforesaid.

CASE No. 62

DRAFT " REGLES ", ARTICLES 5 AND 6 ; THE QUESTION OF NEW NAMES AND OTHER NOMENCLATORIAL ACTS PUBLISHED ELSEWHERE THAN IN " PRIMARY LITERATURE " AND OF THE DEFINITION OF " SECONDARY LITERATURE "

(Commission Reference : Z.N.(S.) 1359)

DOCUMENT 62/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

In a comment published as paragraph 11 of *Opinion* 444 (1957, *Ops. Decls. int. Comm. zool. Nomencl.*, **15** : 186) Professor Ernst Mayr implied that a difference ought to be recognised between " primary literature " and " secondary literature " so far as the publication of new zoological names and other acts of consequence in zoological nomenclature is concerned. Every zoologist will probably have an instinctive idea of the difference that Professor Mayr had in mind, and will be able to quote from his own experience instances of such publication having taken place in undesirable ways. It is perhaps easier to understand the right purpose behind the idea than to define it in a satisfactorily objective manner.

2. The *Opinion* referred to dealt with the case of two specific names in the Class Aves (*Cyanecula obscura* Brehm, 1831 and *Larvivora obscura* Berezovsky & Bianchi, 1891) which had become secondary homonyms of one another by reason of both being subjectively referred to the same nominal genus. The senior secondary homonym was suppressed by the use of the Plenary Powers because it had not entered into common usage since the time of its first proposal, and of the half-dozen uses of the name quoted in comments on the original application, three related only to citations of the name as a subjective synonym. Professor Mayr urged that mere citation of a name in this way ought not to rank in censuses of usage and, in effect, that synonymies should not be counted as " primary literature " for nomenclatorial purposes.

3. Most zoologists would probably agree with this contention, and there would probably also be general support for the suggestion that nomenclators and serials devoted to recording literature or to publishing abstracts should also be excluded from the category of " primary literature ". It would probably be widely felt that new names published in such places ought to be considered as invalid because failing to satisfy the requirements—in the spirit, if not in the letter—of Article 6 (the Rules of Availability) of Professor J. Chester Bradley's draft English text of the rules ; and that other nomenclatorial acts so published ought to be considered as failing to satisfy the requirements of Article 5 (the Principle of Conservation). It is relevant here to refer to Professor Bradley's draft Article 7, Section 1, based on Decision 108 of the Copenhagen Congress (*Copenhagen Decisions* : 61)—" All provisions . . . relating to what does or does not constitute publication of a new name shall apply with equal force to publication of any information that would affect nomenclatural practice ". I would also quote the cardinal principle of English law, that justice must not only be done, but it must also be seen to be done. Many zoologists would hold that names published in the non-scientific press should also be banned (draft English text, Article 7, Section 2, *Recommendation* 3, based on the more strongly worded Paris decision, see *Bull. zool. Nomencl.* **4** : 220), but it seems to me impossible to give satisfactory definition to the limits between the " scientific press " and the " non-scientific press ". In the past, authors of reviews have often made nomenclatorial acts, renaming homonyms, selecting lectotypes for species and type-species for genera, etc., and the propriety of this kind of procedure may also be questioned.

4. Apart from the difficulty of determining precisely the limits between primary and secondary literature, it must be recognised that many names in current use, and many nomenclatorial acts (such as type-selections at various levels) which have helped to condition current practice, are based only on publication in what would by general agreement be regarded as secondary literature. It is thus of the greatest importance that no rules or recommendations should be adopted that would, by being endowed with retroactive force upset the stability of such names and practices. Insofar as draft Article 5 (the Principle of Conservation) is concerned, this aspect of the matter may be held to be covered by Section 1 of the Article, which expressly excludes the provisions of the Article from having retroactive effect.

5. Looking further at draft Article 5 in the present connection, it is seen that Section 3 of that Article is the fittest place for the inclusion of provisions relating to names published in secondary literature. Similar provisions would also be appropriately included in Section 6 of Article 6 and as an additional item at the end of Article 7. In the proposals outlined below a tentative list of categories to be regarded as secondary literature from the nomenclatorial point of view is included as a basis for discussion.

6. It is therefore proposed that the second paragraph of Section 3 of Article 5 of the draft English text be deleted and that a new paragraph (i) be adopted as follows :—

(i) No name or any act affecting nomenclatorial practice first published in secondary literature after the date of coming into force of the present Code shall be used to vary any name or nomenclatorial practice in general use, unless expressly sanctioned by the Commission exercising its Plenary Powers.

(a) For the purposes of this Article, the term "secondary literature" is defined as including the following :—

Nomenclators

Serial publications devoted to the recording of literature and any compilation or catalogue of literature

Abstracts of published works

Synonymies in primary literature

Publications designed expressly as field-guides to collectors and students

Sale-catalogues and publications designed to promote or further commerce in living, dead or fossil animals.

(b) For the purposes of this Article, the term "primary literature" is defined as including all publications not expressly comprised in the definition of secondary literature.

The paragraph now numbered (i) would be numbered (ii) and its opening words might be amended to read "A zoologist wishing to reject permanently a senior synonym under the terms of the first paragraph of this Section . . .".

7. It is further proposed that a new paragraph (e) be added to Section 6 of draft Article 6, as follows :—

(e) No name or any nomenclatorial act shall acquire the status of availability if it is published in secondary literature after the date of coming into force of the present Code. [Here may be repeated subparagraphs (i)(a) and (i)(b) of paragraph 6 of this paper.]

8. It is further proposed that a new paragraph (9) be added at the end of Section 4 of draft Article 7, as follows :—

(9) publication in secondary literature after the date of coming into force of the present Code. [Here may be repeated subparagraphs (i)(a) and (i)(b) of paragraph 6 of this paper.]

DOCUMENT 10/6

(*continued from page* 856)

The Substantive Languages of the International Rules : proposal designed to ensure simultaneous discussion by the Colloquium of English and French amendments to Professor J. Chester Bradley's Draft English Text and to the French text based on this

(Commission Reference : Z.N.(S.) 1259)

By **R. V. MELVILLE,** M.Sc.

(*Assistant Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 12th May 1958)

In a note prefaced to the French text based on Professor J. Chester Bradley's Draft English Text of the International Rules of Zoological Nomenclature, the members of the Commission appointed by the Société Zoologique de France to prepare this text express the hope that the discussions in the Colloquium will proceed simultaneously on the basis of both the English and French texts, and that no modifications shall be approved for either text, in part or in whole, that are not simultaneously approved for the other. This suggestion is made so that the Colloquium can produce, at the end of its work, two texts, discussed and approved in complete equality with each other (or the raw materials of such texts), neither of which can be regarded as a " translation " of the other.

2. It is considered that this proposal offers the best practical means of ensuring the co-equality of the French and English texts of the Rules as these will be presented to the XV International Congress of Zoology for approval, in accordance with the direction given by Professor Ragnar Spärck in his minute of 7th November 1953 (*Copenhagen Decisions* : 128—131 ; reprinted in *Bull. zool. Nomencl.* **15** : 855—856). The International Trust has therefore arranged with Professor H. Munro Fox that he will be responsible for providing translations both from and into French at such times as this may be necessary. The French authorities concerned have approved this arrangement and have offered their co-operation. In addition, they have been asked to nominate a French zoologist to serve on the Bureau of the Colloquium and to assist in preparing the revised French text of the *Règles.*

DOCUMENT 15/3

(*continued from page* 295)

On the interpretation of " oldest " name

(Commission Reference : Z.N.(S.) 1291)

By **C. E. TOTTENHAM**

(*University Museum of Zoology, Cambridge, England*)

(Letter dated 7th May 1958)

Section 2 of Article 8 will involve work for some zoologist in order to provide material upon which a decision can be based, work for the secretariat, work for the commissioners, expense to the subscribers to the *Bulletin*, and delay probably of several years before the matter can be settled. I suggest a much simpler solution which would involve no labour, no expense, no delay and which would probably result in no more (perhaps fewer) changes of name. Some of the names affected by the identical date of two publications would be already established by one or other of the provisions of Article 5. It is proposed that " If two names for one taxon were established in publications of identical date and neither of these is validated under Article 5 and both are available, then the name which comes first in (the Latin) alphabetical order shall be the valid name of the taxon ".

DOCUMENT 21/4

(*continued from page* 859)

Draft " Regles ", Article 28, Section 11, (d) (iii) (1) : proposed attribution of the neuter gender to certain generic names consisting of compound words

(Commission Reference Z.N.(S.)996)

By **AFRANIO DO AMARAL**

(*Instituto Butantan, Sao Paulo, Brazil*)

(Extract from a letter dated 8th February 1958)

I should like to suggest the omission of Article 28, Section (d) (iii) (1) (*Bull.* **14** : 213, lines 3—5) for the reasons set forth in the note—of which I annexe a copy—which I attached to Voting Paper V.P.(57)62 on Case Z.(S.)1278 (relating to the gender attributable to certain names having the terminations " *-rhynchus* " and " *-gnathus* ").

ANNEXE

Note dated 20th November 1957, attached to Voting Paper V.P.(57)52.

As a matter of fact, the latinization of all such names, which are real *nomina agentis*, induces us to consider them as adjectival nouns. It would be linguistically incorrect to keep the genders of their respective Greek etyma.

DOCUMENT 21/5

Draft " Règles ", Article 28, Section 11 (gender to be attributed to certain classes of generic names)

(Commission Reference : Z.N.(S.) 996)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

When the Copenhagen Congress laid down certain rules for determining the gender of generic names (*Copenhagen Decisions* : 49—51, paragraph 84), it at the same time directed the International Commission (: 51, paragraph 85) to consult with its Classical Advisers so that the rules then provisionally adopted could be revised to such extent as might be necessary before they were finally included in the *Règles*. The results of this consultation were not fully available at the time when Professor J. Chester Bradley was drafting the relevant portion of his draft English text of the Rules, at which time the Commission's decision on the reports received from its Classical Adviser had not been completely rendered in the form of *Declarations*. When these *Declarations* had been adopted Professor Bradley submitted a paper (published as Document 21/2, *Bull. zool. Nomencl.* **15** : 731—735) incorporating the revised rules for determining the gender of generic names in the form of corrections to Section 11 of Article 28 of the Draft Rules. Unfortunately, these corrections do not embody all the points made by the Commission in its *Declarations* on this subject, and it is thought desirable that the Colloquium should have before it a clear statement of the position as it now stands.

2. The classes of generic names concerned are those which end in " *-ops* " and " *-opsis* " (*Declaration* 36) and those ending in " *-cheilus* " (and " *-chilus* "), " *-gnathus* ", " *-rhamphus* ", " *-rhynchus* ", " *-stathus* " ," *-cera* " and " *-metopa* " (*Declaration* 39 ; see also *Direction* 100). The two last-mentioned endings were not mentioned by Professor Bradley in the relevant paragraph of the emending paper referred to (*Bull. zool. Nomencl.* **15** : 733, paragraph beginning " **P.212,** after line 9 add : (α) "). It is therefore now proposed that the following words be added at the end of this subparagraph (α) and before subparagraph (*β*). Examples : " -cera " from κέρας (Greek neuter) Latinized as *-cera* ; " -metopa " from μετωπον (Greek neuter) Latinized as *-metopa*.

3. It is not clear why Professor Bradley has re-worded the passages in *Declaration* 36 and 39 in which the rule-bearing parts were already expressed in language that can only bear a single construction. It is open to the Colloquium, if it so wishes, to substitute the wording of the *Declarations* for that chosen by Professor Bradley.

4. The position as it now stands in relation to these endings in *Declarations* 36 and 39 (or in *Copenhagen Decisions*), in Professor Bradley's draft, in his paper of emendations to the Draft and in this note is shewn in the accompanying table.

Gender of Generic Names

Greek Termination. Latinized ditto	Gender	Declaration or Copenhagen Decision	Bradley Draft	Gender	Comments
ὄψις opsis	F	36	: 212. 28/11(d)(ii)(3)	F	Made to conform with *Declaration* 36 in Document 21/2, *Bull. zool. Nomencl.* **15** : 731—735
ὄψ (voice) ops	F	36	ditto	F	
ὄψ (face) ops	F	36	ditto	F	
ops, except as above	as generally accepted or M	36	omitted	—	
ὤψ (eye, face ops	M	36	omitted	—	
γαστήρ gaster	F	CD : 49,84(3)	: 212. 28/11(d)(ii)(3)	F	
χέιλος cheilus, chilus	M	39	: 212. 28/11(d)(iii)(1)	N	Made to conform with *Declaration* 39 in Document 21/2, *Bull. zool. Nomencl.* **15** : 731—735
γνάθος gnathus	M	39	: 212. 28/11(d)(ii)(3)	F	
ῥαμφος rhamphus	M	39	: 212. 28/11(d)(iii)(1)	N	
ῥυγχος rhynchus	M	39	ditto	N	
στῆθος stethus, stathus	M	39	ditto	N	
κέρα cera	F	39	omitted	—	now proposed to be added as " Examples " under 28/11(d)(ii)(3)
μέτωπα metopa	F	39	omitted	—	

DOCUMENT 25/15

(*continued from page* 910)

Order/Class Names

(Commission Reference : Z.N.(S.) 1242)

By **L. R. COX**

(*British Museum* (*Natural History*), *London*)

(Letter dated 7th April 1958)

I wish to bring for the attention of the Congress certain problems arising out of the publication of Order/Class names in vernacular form which call for consideration in the interests of nomenclatorial stability. French workers such as Cuvier and Lamarck were so active at the period when many of the main taxonomic divisions were being defined in all phyla, that I am sure that similar problems must exist in most groups. Now that attention is for the first time being directed to the application of rules of nomenclature to the names of higher taxonomic categories, I am sure that it is in the interests of uniformity and stability that action should be taken before workers go any further in disinterring the names of nonentities who (so far as they can ascertain) appear to have been the first authors to have published in Latin form the names of major taxa founded by French authors such as the two I have mentioned.

I would, therefore, gladly propose at the Congress in July that classically derived names of higher taxa first published in vernacularized form should be regarded as Invalid Original Spellings which the Commission might correct at its discretion without affecting the title to authorship, and without having recourse to the Plenary Powers. All the names which I have in mind were published in the French vernacular, but in the international rules it would be wise not to exclude from consideration any names which may have been published in other languages, provided that such names were of classical derivation.

DOCUMENT 25/16

ORDER/CLASS GROUP NAMES FOR THE FLEAS

(Commission Reference : Z.N.(S.) 1242)

By **G. H. E. HOPKINS**

(*British Museum* (*Natural History*), *The Zoological Museum, Herts, England*)

(Enclosure to a letter dated 25th April 1958)

In my list (*Bull. zool. Nomencl.* **15** : 549—552) of the names which have been used for Orders and Suborders of fleas I inadvertently left in the manuscript a paragraph which I had intended to check at a later date and which proves to be incorrect, for Dr. Curtis W. Sabrosky has been kind enough to bring to my notice the fact that the names Proboscidea and Eproboscidea Walker, 1851, do not refer to fleas but to Diptera. He tells me that the names date from 1815, [Leach] *in* Brewster's *Edinburgh Encyclopaedia* (ed. 1) **9** : 161, 162.

Dr. Sabrosky also tells me of another ordinal name for the fleas which is, to the best of my knowledge, quite unknown to workers on the group. This is Pulicaria, which he has noted in Gravenhorst, 1843, *Vergleichende Zoologie*, p. 164 but which may well be earlier (I have seen a presumably invalid plural variant Pulicarii, quoted from Rondani, 1841, but without a proper reference). Gravenhorst used it as a name for the fleas, which he (in common with other zoologists of the period) regarded as a suborder of Diptera. My belief (*Bull. zool. Nomencl.* **15** : 547) that many names in the Order/Class group have probably been overlooked is strongly confirmed by this discovery.

DOCUMENT 25/17

Order/Class names : the case for Bryozoa and Ectoprocta

(Commission Reference : Z.N.(S.) 1242)

By **JOHN D. SOULE**

(*Allan Hancock Foundation, University of Southern California, Los Angeles*)

I note with interest document 25/5 by D. A. Brown, appearing in the *Bulletin of Zoological Nomenclature*, vol. 15, double-part 16/17, pp. 540–542. The article by Dr. Brown entitled : " The relative merits of the Class names ' Polyzoa ' and ' Bryozoa ' ", presents the Polyzoa side of the controversy that has been with us for almost eighty years. (See " On the term Bryozoa and Polyzoa ", A. W. Waters, pp. 34–36 ; " On the terms Polyzoa and Bryozoa ", Thomas Hincks, pp. 127–129 ; and " On the nomenclature of Polyzoa, Busk ", T. R. Jones, p. 220 ; all appearing in *The Annals and Magazine of Natural History*, ser. 5, vol. 5, 1880.)

2. It is my desire to state some of my views on the term " Bryozoa ", and then offer a suggestion that I hope may help to settle the question.

3. No one denies the priority, with regard to the publication date, of J. V. Thompson's paper on the Polyzoa. Memoir 5, here on my desk is dated December 1830. The earliest date accepted for the Ehrenberg *Symboliae Physicae* is March 1831. Nor does anyone fail to understand that J. V. Thompson recognized in the " Polyzoa " a distinct morphological type. In reading Thompson's memoir, I note that he is introducing a new concept, that there is not a single type of zoophyte, but two, the animal of the structural type he refers to as the " Hydra ", and the newly observed structural type the " Polyzoa ". In the second paragraph, on page 541 of the *Bulletin of Zoological Nomenclature*, vol. 15, Dr. Brown states with reference to J. V. Thompson's work : " It was not what he did but what he said that provided the proponents of the term 'Bryozoa' with their chief arguments ". This is true, if one tries to evolve a classification out of a work that is primarily descriptive. Thompson's text and his plates clearly show that he grasped the essentials of the anatomy. In this endeavour he was one of the first successful students, preceded only by Grant, 1827, and Milne Edwards, 1828. It is an excellent piece of research. What Thompson did, and what he said are entierly compatible. He pointed out the anatomical structure and compared it with the other zoophytes known in his day, namely, " Campanulariae ", " Plumulariae ", and the " genuine Sertulariae of Lamarck ".

4. And that is just the point, while he did clearly recognize the structural differences, he did not anywhere in his memoir designate the " Polyzoa " as a new class or order of animal. On page 92, Thompson says : " The Polyzoa will probably be found in many dissimilar Genera of the Zoophytes, and even mixed up with Hydra in some as they appear to be in the Sertularia of others, and hence this discovery must be the cause of extensive alterations and dismemberments in the Class with which they have hitherto been associated." This further was quoted by Hincks, 1880, p. 128, coupled with a sentence further along in the memoir, and used to indicate a class designation on the part of Thompson. A sentence that Hincks overlooked, however, was written by Thompson immediately following the sentence quoted above, and states as follows : " Thus this discovery will remove that portion of Sertularia not provided with distinct oviferous receptacles, to the class Mollusca acephala, as well as such other genera as may hereafter be found similarly circumstanced." Instead of setting up either by designation or by implication a new class for his polyzoans, Thompson inserted them into the established class Mollusca Acephala.

5. Dr. Brown criticizes Ehrenberg's diagnosis of the Class Bryozoa as being scarcely precise. By present day standards, obviously this is true, and not even good by nineteenth century standards, but the fact remains, Ehrenberg did set up two distinct classes, Circulus I Anthozoa and Circulus II Bryozoa, and he did set forth a diagnosis for these groupings. If priority of names be important, then Ehrenberg is the first to set up a classification of the group, especially when we recall that Thompson's " Polyzoa " was placed in the class Mollusca Acephala by its own author. Dr. Brown's statement that Ehrenberg had not really discovered that the bryozoa were unique is disputed by two things. First, Ehrenberg could hardly by mere chance have set up his " circulus Bryozoa " with no basis of understanding. Secondly, the statement is disputed clearly by George Johnston's " History of British Zoophytes ", 2nd ed. 1847, vol. 1, p. 460 : " It was proof of Ehrenberg's clearer views of their great difference in structure when he divided the zoophytes into grand sections, the Anthozoa and the Bryozoa ".

6. I am in complete accord with Dr. Brown in my respect and admiration of the works of Sir Sidney Harmer, the Rev. Thomas Hincks, and Dr. Anna B. Hastings. I would also like to state that I feel the same way about the work

of Dr. Brown, besides holding him in high personal regard as a friend as well as a colleague. It is quite true that there has been wider usage of the term " Bryozoa " from the geographical point of view, the term " Polyzoa " being used by the British workers. Dr. Brown names twelve authors who used the name " Polyzoa ". Compared with this a quick survey of the literature discloses forty-five authors, not including those with just a minor paper to their credit, who used the term " Bryozoa ". Today there are two major students of the group using the term " Polyzoa ", namely, Dr. Hastings in England, and Dr. Brown in New Zealand. In contrast to this there are living today at least twenty workers using the term " Bryozoa ", including such authorities as Marcus in Brazil, Silen in Sweden, and Rogick in the United States.

7. Historically this controversy has always reached an impasse, both sides certain of their correctness. While I feel confident that the weight of the argument is in favour of " Bryozoa ", the current issue can be resolved by a compromise. There seems to be sufficient anatomical and embryological evidence, on the basis of our present knowledge, to raise the term " Ectoprocta " to higher status, in the hope that this will be agreeable to both sides. That this term is acceptable to some of the invertebrate zoologists in England is indicated by its adoption, p. 652, Phylum Ectoprocta, in the latest (1958) edition of " The Invertebrata ", Borradaile and Potts, 3rd revision, 1958, by G. A. Kerkut of the University of Southampton. It is my understanding that Dr. Libbie Hyman in the United States, has included as a portion of her forthcoming volume 5 in the invertebrate series a section on the Phylum Ectoprocta.

DOCUMENT 25/18

Order/Class names : problems in the selection of type genera

(Commission Reference Z.N.(S.) 1242)

By **JOHN O. CORLISS***
(*University of Illinois*)

I. Relationship of types of highest categories to their major included taxa.

Considering first the highest taxonomic levels, what should be the relationship of the types of orders to those of classes, and the types of classes to those of the phylum or subphyla ?

It seems sensible to conclude that the single type-genus of a phylum should also be the type of one of the included subphyla and, at the same time, of one of the latter's included classes, and so on down the taxonomic ladder to and including the family-group level. But which order is to be chosen to supply the type-genus for the subphylum, and possibly the phylum, of which it is a subordinate member ? The best-known order (if so, how is this determinable for certain) ? The largest ? The most widely distributed ? The most extensively studied in experimental research ? The oldest ? The most primitive or the most specialized or intermediate ? The most fully or precisely characterized ? The most representative (but considerable subjectivity becomes involved here) ? Must it be one of the orders originally included in the subphylum (or phylum) ?

In the case of the protozoan subphylum CILIOPHORA, I believe that the type-genus also should be type of the single included class and of one of the latter's two subclasses as well as of one of the included orders. The genus *Paramecium* is my choice for this type, in spite of several minor complications (see Section IV below). Kent (1880–81) listed this familiar genus as " typical " of his order (= my subclass) Holotricha, and it has long since enjoyed the reputation of being well known, widely distributed, and often studied. Its

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*The investigation described in this paper was carried out under Grant 3887 from the National Science Foundation.

name is even pre-Linnean, a rare occurrence among protozoa ; it was introduced into the post-1758 literature by O. F. Müller, in 1773. Selection of *Paramecium* as the ciliophoran type-genus necessitates rejection of Copeland's (1956) recent designation of *Vorticella*, also a genus of long-standing but containing species quite atypical of ciliates in general.

The ciliate subclass not containing *Paramecium* also should have as type-genus the type of one of its included orders, in my opinion. The genus *Euplotes*, well known although rather specialized anatomically and presumably very highly evolved, is my choice here because its species exemplify so well the most distinctive characteristics of its subclass, the Spirotricha.

II. Relationship of types of higher taxa to their subtaxa.

What should be the relationship of the type of a class to the types of its included subclasses ; of an order, to its included suborders ?

This question is answered in part in the revised *Code* (Bradley, 1957). Article 18, entitled " Types ", states in its first section : " The type of a taxon is always the type of its nominate subtaxon, if there be one, and *vice versa* ". But what about the many instances in which none of the subtaxa is nominate ? In such instances should one of the suborders be considered more " representative " than the others, and its type-genus designated type of the order ? But if there is no suborder clearly typical of the order, should a primitive one or a more complex one be favoured to provide a genus as type of the whole order ?

In the subphylum CILIOPHORA there are at present, in the classificational scheme followed here (see Corliss, 1957), five orders which contain suborders, but in only one case is there a nominate suborder (Order Heterotrichida, Suborder Heterotrichina). Therefore, an arbitrary decision has to be made regarding which suborder will supply the type of the order in the other instances. In all four of them the choice has to be made between the more (or most) primitive and the more (or most) highly evolved group of ciliates. As a general principle, I favor designation of an ordinal type from the more primitive of included suborders ; for example : from Suborder Rhabdophorina of Order Gymnostomatida ; Suborder Arhynchodina of Order Thigmotrichida ; Suborder Sessilina of Order Peritrichida. But in the remaining case I have been more or less forced to choose the most specialized suborder as source of the type genus, for it is in the order Hymenostomatida that one finds *Paramecium* (older and most current textbooks notwithstanding !), a member of the most highly evolved suborder Peniculina, already selected (see above) as type of the entire subphylum of ciliates. Following the principle espoused in Section I, one cannot choose any other genus to represent the hymenostome ciliates.

III. Relationship of Types of orders to their included families.

What should be the relationship of the type of an order or suborder to its included families ?

If the higher taxa concerned have, in effect, nominate families, it would seem that the types of those families should without question be declared type-genera of the appropriate taxa in the order-group. When such is not the case, however, essentially the same questions as posed above (Section I, p. 1) with regard to orders within the subphylum apply here : if the " most representative " family is to be used as source of the ordinal type, how does one determine the identity of that family within the order, etc. ? Families automatically have type-genera, since a family-group name is based upon the name of the included genus which must then be recognized as the type ; but what if such types taxonomically seem quite atypical of the order, represent poorly known genera, have names in danger of becoming buried as synonyms or homonyms, etc., etc. ?

Among the ciliated protozoa, there are only three cases of suborders which contain families having their names formed from the same stem as the suborder : the family Tetrahymenidae in the suborder Tetrahymenina, Pleuronematidae in Pleuronematina, and Licnophoridae in Licnophorina. In all other instances, save two, I have endeavoured to recognize the most appropriate families as sources of types for the higher categories, employing the type-genera of those familial groups as the ordinal or subordinal types as well. In the two exceptional cases (*Saprodinium* as type of Odontostomatida and *Entodinium* as type of Entodiniomorphida) extenuating circumstances (see Section IV below) have obliged me to turn to genera not types of the families to which they belong.

IV. Relationship of newly designated types to those previously chosen.

To what extent, if any, should the " Committee of Specialists " consider as binding past actions related to the designation, directly or by implication, of types in the phylum-, class-, and order-groups ? That is, to what extent should priority become involved if or when different types have been indicated by different workers at various times in the past ?

In some cases type-genera have been selected in the past ; in other instances the stem of certain generic names has been used in forming the name of an order or suborder. What if the genera so chosen are not types of families ? Or what if they are not genera originally included in the higher taxon at the time of its establishment ? What about ill-chosen types, names of poorly described genera, or names now existing only as synonyms or homonyms ? To what extent, if any, are ethics involved ?

To my knowledge, types for the higher groups within the subphylum CILIOPHORA seldom have been deliberately selected to date. There are a few cases. Copeland (1956) quite recently designated *Vorticella* as type of his " Phylum " CILIOPHORA (and of his strange " Order Stomatoda ") and *Acineta* of his Order " Tentaculifera ". As implied above (Section I, p. 2), I do not feel bound by Copeland's decision regarding the type of the entire ciliate assemblage since I consider it an inappropriate one ; however, I am in agreement with his designation of *Acineta* for the order Suctorida. *Tetrahymena* has, in effect, been indicated as type of its nominate suborder Tetrahymenina, and, similarly, *Pleuronema* of Pleuronematina, and *Licnophora* of Licnophorina (Corliss, 1956, 1957). Kent (1880–81), over 75 years ago, mentioned some " typical genera " of his " Sub-Kingdom " PROTOZOA in his " tabular view of the sections, classes, [and] orders ". *Paramecium*, *Acineta*, *Euplotes*, and *Vorticella* were among those listed opposite the several ciliate groups recognized at that time, but solely in the case of *Paramecium* (representing " Order " Holotricha) was only one generic name matched with a given higher taxon. Nevertheless, I have allowed myself to be influenced by Kent's choices in my own thinking. The order Tintinnida (originally described by Kofoid & Campbell, 1929, as " Suborder Tintinnoinea ") employs as stem of its name the base of the generic name *Tintinnus* ; therefore, I believe that this genus must be considered as type of its order. Order Entodiniomorphida (originally erected by Reichenow in Doflein & Reichenow, 1929, as " Suborder Entodiniomorpha ") definitely was set up with the genus *Entodinium* in mind ; therefore, I consider it as the ordinal type in spite of its primitiveness and its happening not to be type of a family of its own.

There are two cases in which I have not chosen names of types of included families in selection of ordinal types :

(1) In the one just mentioned above, involving the order Entodiniomorphida, the genus *Ophryoscolex*, type of the major family Ophryoscolecidae, ordinarily would be a much more reasonable choice, in my opinion. But I believe that the similarity between the names *Entodinium* and Entodiniomorphida and the wishes of the originator of the higher taxon should be honored : Reichenow (in Doflein & Reichenow, 1929) wrote : " Die wenigst spezialisierten Formen werden durch die Gattung *Entodinium* dargestellt, deren Namen wir daher zur Kennzeichnung der Unterordnung wählen . . ."

(2) In the case of the curious Odontostomatida (a replacement name for the preoccupied Ctenostomatida : see Corliss, 1957), I have decided to propose *Saprodinium*, ordinarily not the most likely candidate, as type because the name of the type (*Epalxis*) of the most important family, the Epalcidae, is probably destined to fall as a homonym of *Epalxis*, the name of a genus of fossil molluscs described earlier. *Saprodinium* is a member of the same family. *Discomorpha*, type of a second family and possibly the second most reasonable choice as type-genus of the order (for reasons too detailed to mention here), also has a name which should fall as a homonym : in this case a coleopteran

insect is implicated. As a general policy I think that it is unwise to become involved with genera whose names eventually will be contested on grounds of preoccupation, unless it seems absolutely necessary. I am aware, of course, that it is the organism, not the name, which is considered the type; but I should prefer to make exceptions in order to avoid the possibility of compounding rather than alleviating the confusion. Further discussion of this matter or citation of additional examples is beyond the scope of the present brief report.

The case of the familiar genus *Paramecium*, a member of the order Hymenostomatida, is a little complicated for two reasons: the controversy over the spelling of its name (see Woodruff's review, 1945), and the fact that it is still considered by many as the best-known genus of the order Trichostomatida, its taxonomic location of long-standing, in spite of its dubious affinities with genuine trichostomes (see Corliss, 1956, and comments on pp. 2 and 4, above). Also Copeland's (1956) choice of *Vorticella* as type of the subphylum (see pp. 2 and 6) possibly introduces a problem of ethics regarding my own presently proposed selection of *Paramecium* as type of the same major group of protozoa.

V. Relationship of representative drawings to proposed type-genera.

If it is desired to represent the type-genus of a higher category by a drawing, must the species depicted be the type-species of that genus? And must it be the type-specimen of that species, if either it or a previously published usable illustration of it is available?

Many complications arise here, at taxonomic, phylogenetic, and even nomenclatural levels. The foreword of the draft of the new Article 18 states, in part: "A type is an individual specimen or a taxon, not the name of the taxon. Of a species, it is a specimen, of a genus, it is a species, of a higher group, a genus, but *in the ultimate analysis each can be carried back to the individual specimen that is the type of a species*". [Italics mine.]

In the case of most protozoa, and particularly free-living ciliates, type-specimens just do not exist. Type-species of some genera may never have been figured; it will be recalled that drawings are not required by the rules. Many drawings of species apt to be involved in the matter under discussion are poor or only partial. What is the best procedure for the person interested in portraying "representative types" of ciliophoran orders and suborders? I endorse this fairly conservative point of view: to favor priority and to employ type-species of type-genera whenever possible, modifying original figures judiciously to show the features of greatest "typical" significance.

Summary

The purpose of this communication has not been to make formal proposal of type-genera for the higher ciliophoran taxa but to reveal some of the major problems involved in the background preparation for making such designations at a more appropriate time and place. In general, the problems which I have encountered and which I have considered above tend to point up, in my opinion, certain definite inadequacies and an over-all incompleteness in the proposed new rules concerned with choice of types for higher categories.

The tentative conclusions or " answers " which I espouse as general procedures in regard to the five major problems considered in the body of this note are these :

1. That the type-genera of the highest categories should be chosen from among the types of their major included taxa.

2. That the types of classes or orders should also be types of their most appropriate included subclasses or suborders, with nominate subtaxa, when in existence, given first consideration.

3. That ordinarily the type of an order (or suborder) should also be the type of the most " typical " included family, with families whose names have been formed from the same stem as that of the higher taxa being given first consideration ; and that the type should be an originally included genus of the higher taxon whenever possible.

4. That the I.C.Z.N., or its " Committee of Specialists ", should not feel bound by selections of types in the past literature if there is good reason to judge such designations as inappropriate or as contravening (new) procedures which may be established with regard to such selections ; and that, in the interests of stabilization and common sense, exceptions be allowed to the proposals suggested in points 1–3 above, when good reasons exist for such divergence from the rules.

5. That, if it is desired to represent type-genera by publication of drawings, such illustrations generally should be based upon existing figures of type-species unless the figures are inappropriate, entirely inadequate, or represent organisms whose nomenclatural status is controversial to a confusing extent.

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Addendum

The preceding comments relating to the subject of selection of type-genera for the suprafamilial zoological taxa were drafted several months before the appearance of the " Seventh Instalment of the London Congress Agenda Paper " (*Bull. zool. Nomencl.* **15** (Double-Part 16/17) : 489–556). Thus independently I have arrived at some of the same conclusions reached by Melville & Durham (Document 25/2) which are also clearly expressed in the brief discussion by Hemming (Document 25/1). My own earlier note (Document 25/3) also appears in the above cited issue of the *Bulletin of Zoological Nomenclature*. [I should like here to correct a serious typographical error in that paper ; the last two lines on p. 521 should read : " Kahl : same as for the order ; suborder Mobilina Kahl : *Urceolaria* Lamarck, 1801 ".]

The matter seems to me to be of such basic importance that a little repetition is not without value. Furthermore, I have raised other questions not previously voiced by anyone else. In my opinion the presently proposed new *Code* (as drafted by Bradley, 1957) is quite inadequate in regard to the general problem of " types ", whether the animals under consideration belong to the Protozoa or the Metazoa. Such weaknesses are discovered only when serious attempts are made to apply the rules to actual cases.

Document 27/7

(*continued from page* 913)

Draft " Règles ", Article 5 : Continuity and Universality of Usage : Discussion and Proposals

(Commission Reference : Z.N.(S.) 861)

By **C. E. TOTTENHAM**

(*University Museum of Zoology, Cambridge, England*)

(Enclosure to Letter dated 7th May 1958)

Writing as one who has done some work on the nomenclature of Coleoptera I am delighted with Prof. Bradley's Draft Code as a whole ; I feel that many obscure points have been made clear. I am far from satisfied, however, with Article 5 and am of the firm opinion that if it is enacted in its present form it is going to prove a great stumbling block and will prove to be impracticable. For this reason I am discussing the subject at length.

2. While fully in agreement with the Principle of Conservation in itself, I deeply regret its introduction into the Code as a Rule. It is often directly contradictory to the Principle of Priority and therefore its introduction means a fundamental change of Rule. If the Rules themselves are subject to such fundamental change and are themselves unstable, how can the nomenclature which is based upon them be stable ? Furthermore, its introduction as a Rule would mean that a large amount of zoological nomenclature would be based upon the errors of present day zoologists ; this is wholly undesirable ; accuracy is a hall-mark of good scientific work. It is sad to think that this system of basing much nomenclature on errors should be introduced into the Code this year when we are celebrating the bicentenary of Linnaeus who laid the foundations of our zoological nomenclature. It is still more regrettable that the Conservation Principle should be applied to names " in general current use ", for we today are the very zoologists who have the least excuse for errors in nomenclature having had the International Rules in force for a longer period than any of our predecessors.

It seems to me essential that the Colloquium in discussing the Code and the Congress in enacting it should be quite clear as to its purpose. Is the New Code designed to amplify the existing Rules to cover as many cases as possible, to make the rules clearer, to facilitate their application and so to hasten law and order in nomenclature ? Or is it designed to please as many conflicting personal preferences as possible and thus prolong differences of usage ? Most of the Code points definitely to the former, Article 5 to the latter.

3. There are three basic facts, or difficulties, which we must face. The first is that a Code of Rules, in itself, accomplishes nothing. The desired uniformity and stability are not automatic products of the Code, they can only be established when individual zoologists (or all if they like to multiply the work for the sake of producing the same results) study the Code, and strictly apply it to the nomenclature of their own special field of zoology and when other zoologists, grateful for having had the work done for them, readily adopt the names which are the only valid names under the Code. The second is the fact that we are all zoologists, and being zoologists, whether by profession or because we have taken up some branch of zoology as a hobby, we are interested in the animals themselves rather than in their names. Zoologists can hardly be expected to set aside their main interests and devote themselves to weeks or months of nomenclatural work if all that they can reasonably hope for is the (rather dubious) mental satisfaction of knowing that the results of their labours will be very largely ignored by their fellow workers. (I have put forward a proposal which, if adopted, might encourage more work being done on nomenclature.) The third fact is that order cannot be produced out of chaos without some change, and therefore changes necessitated by the application of the Code should be gladly and speedily adopted.

4. I am convinced that the inconvenience of substituting a valid name in the place of an invalid name which has been in general usage has been magnified out of all proportions in the minds of many zoologists. In fact, except in that very insignificant percentage of cases where the name has been widely used in some branch of zoology other than the systematic literature of the animals themselves, the inconvenience is so trifling as to be unworthy of mention. In England and Wales alone annually over 350,000 people change the name in general use (Miss X.) on marriage to some other name which has never been applied to them (Mrs. Y). No serious difficulty is encountered, any inconvenience is slight, the change is made as a matter of course in accordance with rule and nobody complains. The actual situation in taxonomic Zoology with regard to name changes can be well summed up by repeating a recent conversation. I was talking to a zoologist who was especially interested in the genus *K-us*, and I pointed out that the type-species was probably *a-us*. He replied " Then the name *K-us* must be transferred to the genus *L-us*, the name *L-us* must be rejected as a junior objective synonym, the subgenus *L-us* Smith will become the subgenus *K-us* s. str, a new name will have to be found for the old subgenus *K-us* s. str. Quite simple ; that's all there is to it." Of course he was right. Since facts are more convincing than opinions, I put this case to the test and found that within fifteen minutes I could change all the names in question in my cabinet, make the necessary changes in a world list and in the British list and also make out cross reference index cards for all the names. Since any one of these actions would have been sufficient it will be seen that the trouble caused by such a name change to 100 zoologists is equivalent to one day's work for one man. Either 100 zoologists have to spend five minutes each in making the required changes or one of them must spend at least a day in preparing a case for the Commission, at least another day's work will be imposed upon the Secretariat, work in studying the case and recording votes will be imposed upon each of the Commissioners, and every subscriber to the Bulletin will be inflicted with the additional expense of at least 2s. 6d. It should be clearly borne in mind (1) a change in name does not cause confusion and only causes a few minutes' trouble, (2) the use of an invalid name in literature does not in itself cause confusion, it only causes a little inconvenience and trouble to others, (3) what does cause confusion is the use of the wrong name in literature without the author saying so or giving any indication that it is not necessarily the valid name that he is using.

5. With regard to the Sections of the Article as published in the Draft, Section 1 is so generalised and so obvious as to be almost entirely superfluous. "Any action or usage of a name " would cover such things as the policeman tying up his bootlace or a titled lady calling her pet Pekinese " Toodle-ums ".

6. Sections 1 and 3 of the Draft seem to me to be contradictory. Section 1 states " Nothing in this Code shall be construed to render invalid any action or usage of a name which was valid before the final enactment of this present Code ". This seems clear and definite. It would mean that if a valid name for a taxon has been used in accordance with the *Règles*, i.e. since 1903, nothing in the new Code shall retroact to invalidate that usage. For all practical purposes this section would establish permanently the usage of a valid senior synonym provided that it has been used at all during the last 55 years, and such a name might be regarded as virtually placed upon the Official List of Accepted Names. If this interpretation is correct Section 1 will be of immense value, not only because in many cases it will get over the difficulty of establishing " general use " and will avoid the subjective element, but particularly it will be a clear indication that the Congress makes Rules with a view to their being observed and not broken : it supports those zoologists who in the last 55 years have obeyed the Rules.

7. Section 3 on the other hand states " If a name for a taxon that is not an invalid homonym is in general current use and has been available for fifty years or more, it shall not be replaced on nomenclaturial grounds by a senior synonym, unless the latter has been widely used during some part of the fifty years preceding its proposed substitution ". If a senior synonym has been validly used at all during the last fifty years, and section 1 definitely validates that usage, how can it be replaced by a junior synonym which has been more frequently used during that period ? Section 3 cannot be applied unless the word " widely " in line 22 is omitted. Then under this section the Principle of Conservation comes into use for all cases in which after the enactment of the Code it may be found that there is a senior synonym which might replace the junior synonym in general use.

8. The words " is in general current use " are unsatisfactory for three reasons. (1) A name cannot be in use if it is not in current use : the word " current " is redundant. (2) The second criterion for usage, that the name " has appeared ten or more times in literature " does not necessarily mean " current use ", the name may have dropped out of use entirely fifty years ago. (3) The word " general " is ambiguous. Does it mean ' general ' in the original meaning of the word ' applying to the whole class ', as used, for example, in the title General Post Office (where all forms of postal service are transacted) or does it mean ' general ' in the more common modern usage ' applying to the large majority of the class '.

9. The most serious objection to Section 3 is that it is so impracticable, and in some cases would involve so much labour, that it can only result in a policy of laissez faire and the perpetration of diverse usages. The introduction of the Principle of Conservation may result in the fact that many names in common use are in accordance with the new Code, but this will be entirely fortuitous. A sound zoological nomenclature depends upon zoologists deliberately applying the rules to every name. Whether the Principle of Conservation is introduced or not, each zoologist still has to ensure that the nomenclature he is using is in accordance with the Code. Under Section 3 the work involved is greatly increased. Suppose that in the year 1965 a zoologist is trying to apply the Code to see whether he must use the generic name *X-us* Jones (to which he is accustomed) or *Y-us* Smith. Under the old Code he would have to find out date, original reference, availability and type species of both nominal genera. At this point he would stop and apply the senior name. Under the new Code, in many cases he cannot stop at this point. He must find out if *Y-us* (if that happens to be the senior name) has been used between 1903 and 1958 ; he must find out if *X-us* is in general use at the time he is writing, and, if it is, he must find out whether *Y-us* has only been used in a minor percentage of cases (any positive number up to 49 represents a minor percentage). He will at once be discouraged by the subjective elements and the doubts which will arise. " Ten times or more in literature ". Would twelve papers by the original author in twelve successive volumes of the same periodical count ?

Would twelve papers by the same author in twelve different periodicals count ? Would twelve papers by twelve different authors in two or three volumes of the same periodical count ? Would the use of the name by twelve different authors, in such papers as ' List of the A-idae found in Anglesey ' count ? To be fair it would be necessary to search the literature of all countries in which the genus occurred, this might mean the literature of the whole world. Usage is often geographical. Usage is by no means confined to literature. Usage is far more likely to be influenced by the recent date, quality or usefulness of one work than by the number of times the name has occurred in literature. The usage of a name in a book, published during the last fifty years, is a very clear indication as to whether the author of the book has paid attention to the rules of nomenclature or not, it does not in any sense reveal the usage of either contemporary or later zoologists. I am quite sure that any sane zoologist, as soon as he realized the difficulties that lay ahead, would stop at the same point as that at which he would have stopped under the old Code, and would either apply the Principle of Priority and use the senior name, or, if he preferred the junior name he would use it trusting to luck that his action was justified under the new Code.

10. Section 3 is also impracticable because, if applied, it does not necessarily promote stability. If the junior synonym has not been available for 50 years, the senior synonym must be used ; when the junior synonym reaches its fiftieth birthday, under Section 3, if it is still in general use, it shall not be replaced by the senior synonym unless the latter has been widely used during some part of the fifty years, but under Section 1 it is invalid (assuming that the senior name had been used at all during the part of the fifty years which was prior to the enactment of the Code). Absurd situations may arise ; for example, in a genus *Z-us* a number of specific names established by Jones in 1930 may be junior synonyms. The senior synonyms may not be recognised until after the enactment of the Code. An author writing a revision of the genus *Z-us* in 1979, under the Code would be required to use the senior names ; if he refrained from publishing his work until 1980 he would be required by Section 3 to use the junior names if they were still in general usage. If he intended to publish in 1979, with the senior names as required by the Code, and his publication were held up at the last stages by a printers' strike and consequently did not appear until 1980, his nomenclature would be contrary to the Code, Section 3. In this case also, if the senior names had been used at all prior to the enactment of the Code, Section 1 would invalidate the junior names which would be required by Section 3. Section 3 makes a mockery of Zoological nomenclature. Of course, one of the great troubles lies in the words " general use " which, being incapable of precise definition, constitute a serious weakness ; the Rule cannot have the precision which a rule requires to make it effective.

11. Another grave inconsistency is to be found between Section 3 and the Procedure which follows. Section 3 states " the junior name shall not be replaced by the senior synonym " ; this is mandatory. The Procedure says "A zoologist wishing to reject permanently such a senior synonym . . . "

The inconsistency can be easily overcome by the substitution of the word " junior " in the place of " senior " in line 2 of the Procedure. This substitution would also bring the Recommendations 2 and 4 into line with the Procedure.

12. *Recommendation* 1, " Criteria of usage " (p. 44) : Here it is suggested " (b) That the name is of sufficient importance to have appeared ten or more times in literature ". There is no importance in a name : " What's in a name ? That which we call a rose by any other name would smell as sweet ". The sentence should read "That the name has been used ten or more times in literature ".

13. In the following proposals I believe I have (1) removed or avoided the contradictions in the original Draft, (2) preserved the general intention of both Sections 1 and 3 and of the Copenhagen resolutions, (3) removed the subjective elements, (4) defined exact limits for the application of the Principle of Conservation, (5) made it possible for a zoologist not only to apply the Code but also in so doing establish immediate and permanent validity of a name under the Code. It will be noticed that if the following proposals are adopted the " Procedure " and " Recommendations " of the Draft will be unnecessary.

Proposals

(a) It is proposed that Section 1 should read " Nothing in this Code shall render invalid any action or usage of a valid name in matters of zoological nomenclature which action or usage was valid under the *Régles* before the final enactment of this present Code except as provided in Article 11, Section 1(d). Any name for any taxon which has been established in accordance with the *Régles* shall not be invalidated by the application fo Section 3 ".

(b) It is proposed that Section 3 should read :

Principles of Priority and Conservation

1. If the valid senior synonym for a taxon has been used during the 50 years preceding the enactment of this Code (i.e. during the period in which the Règles have been in force, allowing 5 years grace for them to become known) as the name for the taxon, either in systematic literature, or in catalogues or check-lists of genera and species, the senior synonym shall be the valid name and shall not be replaced by a junior synonym. (This is in accordance with Section 1.)

2. The Principle of Priority shall be applied to all names established after the enactment of this Code.

3. The Principle of Priority shall be applied (a) in the case of generic names if the usage of the junior synonym is invalid because it is inconsistent with the valid type designation and (b) in the case of specific names established as new nominal species as defined in Article 19, Section 2(c), unless the generic name of the binomen is rejected under the Code.

[Note.—The part (b) has been inserted because the advantage of having the type species of a genus permanently known by the name under which it was designated as type species will be felt by zoologists both of the present and of the future, whereas the inconvenience caused by a few simple nomenclatural changes which may possibly result now will be insignificantly small and will only be experienced by a few zoologists in the immediate future.]

4. The Principle of Conservation shall be applied when the senior synonym has not been used as the valid name for the taxon during the 50 years preceding the enactment of this Code either in systematic literature or in catalogues of, or check-lists of, genera and species ; in such cases a junior synonym, which is not itself a junior homonym and which is in use, shall be the valid name of the taxon—

(a) if it has been available for at least 50 years, or

(b) when it has acquired 50 years use, if it has not been replaced by the senior synonym during those 50 years.

(" Replaced " is not to be regarded as synonymous with "used". To replace the junior synonym the senior synonym must be accompanied by a definite statement that the name is being brought into use to ' replace ' the junior synonym and the statement must be accompanied by full references as to authorship, dates and original publications of both names, and in the case of generic names the type species of each nominal genus must be cited with references to the original valid type designations. Any usage of the senior name prior to the "replacement" shall be invalid and without prejudice.)

5. If two or more junior synonyms are in use they shall be regarded as invalid and the senior synonym shall be the valid name.

Recommendation. Authors, especially of systematic works or catalogues, should preface their works with a statement to the effect that either the nomenclature therein is strictly in accordance with the Code or that a specified nomenclature has been followed, whichever is applicable.

(c) It is proposed that Section 4 be altered to " Names which have been long overlooked, that is to say are not to be found (either as the names of taxa or as synonyms) in the systematic literature, or in the catalogues or check-lists of genera and species (of the animals whose names are concerned) over a period of at least fifty years prior to their discovery shall be rejected if their adoption would replace any name validated under any previous Section of this Article ".

(d) It is also proposed that, if the above proposal be adopted, there should be added to *Recommendation* 5 the words " so that the names may be immediately placed upon the *Official Index of Rejected and Invalid Names* ".

Discussion on Dr. H. Lemche's comments and proposal.

Since writing the above, I have received and have been studying the comments and proposal of Dr. Lemche (*Bull. zool. Nomencl.* **15** : 639—642). Whereas I consider his proposal to be preferable to that of Prof. Bradley's Draft, yet I still feel that there are some inconsistencies which should be removed. Dr. Lemche's comment in paragraph 5 (p. 640) " . . . at present . . . then, the shift is made legal and obligatory to others . . . " would appear to be consistent with Section 1 of the Draft Code. This is supported by the opening words to Dr. Lemche's proposal for Section 3, " *Whenever after* (here insert date on which the Revised Text of the Règles comes into force) a well-established name is found to be a junior synonym of some other available name . . . " (italics mine). Thus far I am fully in agreement. After the Code comes into force it would be impossible, or it would at least involve some labour, to discover and bring into use some early, long-forgotten or long-overlooked name. Dr. Lemche then says " it shall be the duty of the author discovering this synonymy, if changing to the older name in some publication, to cite also at least two different papers—written by different authors and published less than fifty years before the change is publicly introduced—in which the senior name has been accepted as the valid name of the said taxon." This is where the difficulties arise. If either (or both) of the papers cited had been written before the date in which the Code comes into force, the use of the senior name would be already validated under Section 1. If both were written subsequently to the coming into force of the Code, the authors would have had no right (under Dr. Lemche's proposal) to make the change to the senior name and their actions would " be invalid and without prejudice " (p. 642). The author " publicly introducing " the change would be citing papers in which an invalid change had been made. Again, if the change has been made in at least two different papers has it not been publicly introduced ? I do not like the distinction between " cite two different papers " and " citations in synonymies or works of reference do not qualify ". Catalogues and Check-lists often aim at a greater accuracy in nomenclature than small papers, and they play a much greater part in influencing usage. I fully agree, however, that citations in synonymies should not qualify.

Dr. Lemche (paragraph 11, p. 641) asks " why strict priority has failed to produce stable names during the past sixty years during which the old Rules were operating ". I do not believe this is due to the inadequacy of the Rule of Priority. In some branches of zoology it is doubtless because zoologists have not studied the early literature in order to establish the nomenclature according to the existing Rules. In other cases it is because zoologists have chosen to ignore the Rules because they prefer some later names. In many cases it is probably simply that zoologists will not be bothered about nomenclature. However excellent the Rules are, however willing zoologists may be to study them and observe them strictly, I think it very probable that we shall still have to endure a number of nomenclatural changes ; the Rule of Homonymy, especially when applied to names which have become homonyms because of a temporary sojourn in a genus, will undoubtedly mean that in course of time many names will be found to be homonyms and therefore must be rejected. Faulty synonymy may also result in some name changes. Other changes may be necessitated on taxonomic grounds.

A careful study of Dr. Lemche's comments and proposal has not induced me not to put forward the alternative Proposals to the original Draft as set out above.

DOCUMENT 28/3

(*continued from page* 661)

Homogeneity of zoological names

(Commission Reference : Z.N.(S.) 1299)

By

BENEDETTO LANZA & ALBERTO SIMONETTA

(*Istituto di Zoologia dell 'Universita, Firenze, Italy*)

(Letter dated 3rd May 1958)

We herewith state our support for the proposals of Professor Bonnet (Document 28/2) concerning the emendation of names based on Greek and Latin words and on classical names. We think indeed that the rare instances of emendation which would involve such a change in the spelling of a name as to make it difficult to recognize can be easily handled by the Commission on Zoological Nomenclature, while the enforcement of the provisions advocated by Professor Bonnet will probably stimulate authors wishing to establish new names to consult people proficient in the classical languages in order to avoid mistakes, which, being easily avoidable, are not to the credit of the author.

We however disagree with Professor Bonnet where he suggests that Latin words having two equally correct spellings should be spelled in zoological nomenclature in only one way. Such a ruling would be indefensible on philological grounds and of little if any practical advantage.

DOCUMENT 30/2

(*continued from page* 666)

The gender to be attributed to infra-subspecific names when consisting of adjectives

(Commission Reference : Z.N.(S.) 1292)

and

DOCUMENT 31/2

(*continued from page* 668)

Citation of names of infra-subspecific forms

(Commission Reference : Z.N.(S.) 1313)

By

BENEDETTO LANZA & ALBERTO SIMONETTA

(*Istituto di Zoologia dell 'Universita, Firenze, Italy*)

(Letter dated 3rd May 1958)

We wish to support the proposals of Dr. Hering (Documents 30/1 and 31/1) concerning the formation of infra-subspecific names.

DOCUMENT 30/3

Draft "Règles", Article 28, Section 13 : Support for Proposal that adjectival infrasubspecific names should be feminine in gender

(Commission Reference : Z.N.(S.) 1292)

By **T. JACZEWSKI**
(*Polish Academy of Sciences, Warsaw*)

(Extract from letter dated 8th May 1958)

I wish to give full support to the proposals of Prof. Erich M. Hering, Zoologisches Museum der Humboldt-Universität zu Berlin, Document 30/1, *Bull. zool. Nomencl.* **15** : 664–6, concerning the feminine gender of adjectival infrasubspecific names[1] . . .

I would like to add in this connection that also in the Slavonic languages the words used to denote infrasubspecific units seem to be mostly of the feminine gender, as in Polish "forma" (= form), "odmiana" (= variety), "aberacja" (= aberration), or in Russian "форма" (= form), "разновидность" (= variety), "аберрация" (= aberration).

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[1] The part of Professor Jaczewski's letter here omitted is reproduced on p. 1092 below as Document 31/3.

DOCUMENT 31/3

Draft " Règles ", Article 4, Section 4 : Support for proposal to give revised " Examples " of infrasubspecific names

(Commission Reference : Z.N.(S.) 1313)

By **T. JACZEWSKI**
(*Polish Academy of Sciences, Warsaw*)

(Extract from letter dated 8th May 1958)

I wish to give full support to the proposals of Prof. Erich M. Hering, Zoologisches Museum der Humboldt-Universität zu Berlin[1] . . . concerning the substitution of revised " Examples " in Section 4 of Article 4 of the revised *Règles*, Document 31/1, *Bull. zool. Nomencl.* **15** : 667–8.

PURCHASED
14 JUL 1958

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[1] The part of Professor Jaczewski's letter here omitted is reproduced in Document 30/3 on p. 1091 above.

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Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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BRITISH

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B. The Members of the Commission

(*Arranged in order of precedence by reference to date of election or of most recent re-election, as prescribed by the International Congress of Zoology*)

Professor H. BOSCHMA (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (1st January 1947)

Senor Dr. Angel CABRERA (*La Plata, Argentina*) (27th July 1948)

Mr. Francis HEMMING (*London, England*) (27th July 1948) (*Secretary*)

Dr. Henning LEMCHE (*Universitetets Zoologiske Museum, Copenhagen, Denmark*) (27th July 1948)

Professor Pierre BONNET (*Université de Toulouse, France*) (9th June 1950)

Mr. Norman Denbigh RILEY (*British Museum (Natural History), London*) (9th June 1950)

Professor Dr. Tadeusz JACZEWSKI (*Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland*) (15th June 1950)

Professor Dr. Robert MERTENS (*Natur Museum u. Forschungs-Institut Senckenberg, Frankfurt a. M., Germany*) (5th July 1950)

Professor Dr. Erich Martin HERING (*Zoologisches Museum der Humboldt-Universität zu Berlin, Germany*) (5th July 1950)

Senhor Dr. Afranio do AMARAL (*S. Paulo, Brazil*) (12th August 1953) (*Vice-President*)

Professor J. R. DYMOND (*University of Toronto, Toronto, Canada*) (12th August 1953)

Professor J. Chester BRADLEY (*Cornell University, Ithaca, N.Y., U.S.A.*) (12th August 1953) (*President*)

Professor Harold E. VOKES (*University of Tulane, Department of Geology, New Orleans, Louisiana, U.S.A.*) (12th August 1953)

Professor Béla HANKÓ (*Mezõgazdasági Museum, Budapest, Hungary*) (12th August 1953)

Dr. Norman R. STOLL (*Rockefeller Institute for Medical Research, New York, N.Y., U.S.A.*) (12th August 1953)

Mr. P. C. SYLVESTER-BRADLEY (*Sheffield University, Sheffield, England*) (12th August 1953)

Dr. L. B. HOLTHUIS (*Rijksmuseum van Natuurlijke Historie, Leiden, The Netherlands*) (12th August 1953)

Dr. K. H. L. KEY (*Commonwealth Scientific and Industrial Research Organisation, Canberra, A.C.T., Australia*) (15th October 1954)

Dr. Alden H. MILLER (*Museum of Vertebrate Zoology, University of California, Berkeley, California, U.S.A.*) (29th October 1954)

Doc. Dr. Ferdinand PRANTL (*Národni Museum v Praze, Prague, Czechoslovakia*) (30th October 1954)

Professor Dr. Wilhelm KÜHNELT (*Zoologisches Institut der Universität, Vienna, Austria*) (6th November 1954)

Professor F. S. BODENHEIMER (*The Hebrew University, Jerusalem, Israel*) (11th November 1954)

Professor Ernst MAYR (*Museum of Comparative Zoology at Harvard College, Cambridge, Massachusetts, U.S.A.*) (4th December 1954)

Professor Enrico TORTONESE (*Museo di Storia Naturale " G. Doria ", Genova, Italy*) (16th December 1954)

Dr. Per BRINCK (*Lunds Universitets, Zoologiska Institution, Lund, Sweden*) (19th May 1958)

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CASE No. 63

DRAFT " REGLES ", ARTICLE 24 : THE QUESTION OF HOMONYMY BETWEEN NAMES AT DIFFERENT TAXONOMIC LEVELS

DOCUMENT 63/1

(Commission Reference : Z.N.(S.) 1361)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

Professor J. Chester Bradley's draft English text of the Rules, Article 24, deals with the question of homonymy between names in the same group, that is with homonymy between specific and subspecific names within a single nominal genus, between generic and subgeneric names, and between names within the Family-group, or within the Order/Class-group or within the Phylum-group as the case may be. Brief reference is also made, in Section 7 of the Article, to the question of homonymy between names at different levels, as when, for example, a generic name and a name in the Order/Class-group are found to consist of identical words.

2. The question of homonymy between names at different taxonomic levels was considered by the Thirteenth International Congress of Zoology at Paris in 1948 (*Bull. zool. Nomencl.* 4 : 164) in connection with *Opinion* 102 and with special reference to the ordinal name Siphonophora Eschscholtz, 1829 and the generic name *Siphonophora* Koch, 1855. The Congress then ruled " that words should be inserted in the *Règles* to make it clear that the Law of Homonymy does not apply as between generic or trivial names on the one hand and the names of units belonging to categories above the family level on the other, and therefore, that, where such a name consists of a word which has already been used as the name of a unit of sub-ordinal or higher category that name is not to be rejected as an invalid homonym ". The purport of this ruling is incorporated in Article 24, section 7 of the draft English text. The Paris Congress added a *Recommendation* " deprecating the selection as generic or trivial names of words previously published as the names of units of subordinal or higher category ". This *Recommendation* is incorporated in Article 10, Recommendation 9(β) (for generic names) and 15 (for specific names) of the draft English text (*Bull.* **14** : 81–82).

3. No mention was made by the Paris Congress, nor is any to be found in Professor Bradley's draft, of possible homonymy between names in the Family-group on the one hand and names at lower levels on the other except in so far as the use of names terminating in -idae and -inae was prohibited in all groups except in families and sub-families respectively. This is the only provision at present in the *Règles* (although omitted from Professor Bradley's draft) which prescribes standard terminations for taxa of particular categories while prohibiting the use of those terminations for any other category. This provision must certainly be re-examined by the London Colloquium in the light of the Copenhagen Decision to include subtribes, tribes and superfamilies[1] in the Family-group of taxa, for since there is no scheme of prescribed terminations for these categories, so there is no provision dealing with homonymy between the names of taxa in these categories and generic and specific names.

4. Instances of homonymy between names in the Family-group and generic names were brought to the notice of the Commission by Mr. D. E. Kimmins (*British Museum* (*Natural History*), *London*) in two letters dated 12th May 1954 and 11th July 1956. In the first of these letters Mr. Kimmins raised the question of the use of unchanged generic names to designate " Sections " of the Family EPHEMERIDAE by Eaton in 1883–1888 (*Trans. Linn. Soc.* [2] *Zool.* (3)). According to Mr. Kimmins, the Family EPHEMERIDAE as understood by Eaton was equivalent to the modern Order Ephemeroptera, and his " Sections " had acquired general acceptance as subfamilies or families, with correctly formed names and with authorship and date as from Eaton's use of the unchanged generic names to designate " Sections ". The Copenhagen Congress decided (*Copenhagen Decisions* : 36, Decision 33(1)) that " a Family-group name was to be accepted as acquiring availability and as ranking for priority from the date of its original publication, irrespective of whether it was then published with one of the terminations now prescribed or currently accepted, provided that it is clear that the term concerned was used to denote a suprageneric category and was not employed merely as a plural noun or adjective ". Mr. Kimmins asked whether this rule would cover cases of Family group names published with no termination added to the stem of the name of the type-genus, as with Eaton's name for " Sections ". While it seems unlikely that this contingency was envisaged by the Copenhagen Collouium, it seems clear that such a conclusion is not expressly excluded, and that a case can be made out for the establishment of current practice in the order Ephemeroptera in the interests of stability of nomenclature.

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[1] The question of the transfer of the superfamily category from the family-group to the Order/Class-group is discussed in Document 59/1 see p. 1035 above.

5. In his second letter, Mr. Kimmins drew attention to the homonymy existing between the generic name *Lestoidea* Tillyard, 1913, and a superfamily name based on the generic name *Lestes*, Leach, 1815, which, if formed in accordance with the practice prevailing in the order Odonata, would be named LESTOIDEA. According to Mr. Kimmins, it was to avoid this homonymy that Fraser (1951, *Entom. News* **62** : 61–69) formed the superfamily name as LESTINI, but this was thought to be undesirable because the termination -ini is commonly used to designate the names of tribes. If the category Superfamily is to be treated as belonging to the Order/Class-group, then this case is covered by the decision of the Paris Congress referred to in paragraph 2 above. It must be noted, however, that that decision refers only to generic names that are junior homonyms of names of taxa above family level and does not provide for cases of the converse kind where it is the Order/Class-group name that is the junior homonym.

6. While it will be generally agreed that homonymy between names of categories at different levels ought to be avoided, it will also be agreed that whatever steps are taken to this end ought not to cause disturbance to names that are currently accepted, especially in the various fields of applied zoology. So far as the future is concerned, one means of avoiding homonymy of the kind discussed here would be to adopt a scheme of uniform terminations for all categories above the generic level, at the same time prohibiting the use of names with any of the prescribed terminations at any other than the relevant taxonomic level. The Copenhagen Congress rejected a proposal for the introduction of a scheme of prescribed and uniform terminations for categories in the Order/Class-group (*Copenhagen Decisions* : 42, Decision 67) and the present writer feels that it was right to do so, since the introduction of any such scheme would result in the widespread disturbance of many long familiar names and would only replace existing homonyms between names of supra-generic taxa on the one hand and generic and specific names on the other by a new, and probably equally irritating set of homonyms. Moreover, it seems to me that homonymy between a generic name in one class and the name of a higher category taxon in quite a different class is not a likely cause of confusion. It is only where this kind of homonymy exists within a single class or order, as in the cases of the Ephemeroptera and Odonata illustrated by Mr. Kimmins, that action is urgently called for.

7. Viewed from this more restricted angle, the problem of homonymy between names at different taxonomic levels is more susceptible of treatment. It is necessary only to require that, in each Class of the animal kingdom, the terminations of names of each category recognised in the Class in question in the Family-group and in the Order/Class-group must be distinct from those of names in every other category in the same groups within the Class concerned. This will, in fact, do little more than give legal form to current practice. It will be necessary also to prohibit the future formation of names having any of the prescribed terminations for taxa in any category other than that to which the termination in question relates. Violations of this rule should not be subject to automatic correction, but should be submitted to the Commission for a decision. Names in current use which violate the rule must not be altered or replaced without the express sanction of the Commission exercising its Plenary Powers.

8. The draft of Article 24 in the English text prepared by Professor Bradley is difficult to interpret in the light of the present problem, for Section 1 of the Article expressly rejects all homonyms at whatever level, without exception for homonymy between names at different levels as provided for at Paris. This review of the problem should have shewn that the rigid application of this Section would cause considerable disturbance to many established names, and this can only be avoided if the Section is drastically reworded.

9. It is therefore proposed that Section 1 of draft Article 24 be amended to read as follows :—

> Section 1. The Law of Homonymy.—Any name that is a junior homonym of another objectively different available name in the same taxonomic category above the species-level shall be rejected unless the Commission exercising its Plenary Powers directs to the contrary.
>
> (i) Homonymy between names at different taxonomic levels.
>
> (a) If a name at a given taxonomic level in a given Class is found to be a homonym of another available name at a different taxonomic level in a different Class, the junior homonym is not to be automatically rejected. Specialists wishing to reject such a junior homonym must apply to the International Commission for a decision under (draft) Article 29, Section 6(b).
>
> (b) As from the date of coming into force of the present Code, the terminations of names in each category in the Order/Class-group and in the Family-group within each Class shall be distinct from the terminations used for every other category in the same groups in the same Class. As from the date specified the formation of new names having any of the said terminations for taxa in any other category in the said groups or for genera (and subgenera) and species (and subspecies) in the Class concerned is prohibited. Violations of this rule, and cases in which it is doubtful on taxonomic grounds whether a condition of intra-Class homonymy exists, are to be referred to the International Commission for decision under (draft) Article 29, Section 6(b).
>
> (c) No name in current use that contravenes the provisions of paragraph (i)(b) of this Section is to be rejected or replaced except by the sanction of the International Commission exercising its Plenary Powers.

CASE No. 64

DRAFT " REGLES ", ARTICLE 4 : REQUEST FOR RECONSIDERATION OF THE TERMS " TRIVIAL NAME " AND " BINARY NOMENCLATURE "

(Commission Reference : Z.N.(S.) 1362)

DOCUMENT 64/1

By **HOBART M. SMITH**

(*Department of Zoology, University of Illinois, Urbana, Illinois, U.S.A.*)

(Enclosure to a letter dated 14th September 1955)

The Copenhagen Decisions on Zoological Nomenclature require a number of revisions of definitions of infrageneric group names—that is, of specific names, subspecific names, and infrasubspecific names, collectively. The terms involved in the present discussion are, briefly, defined as follows in the Copenhagen Decisions : (1) binomen, the combination of two names, for the genus and the species ; (2) trinomen, the combination of three names, for the genus, for the species, and for the subspecies ; (3) specific name, the single-word name applied to any species of any genus ; and (4) the subspecific name, the single-word name applied to any subspecies of any species. The term " trivial name " was discarded at the same time as the preceding terms and definitions were adopted.

2. Definite acceptance of these changes would lead to two undesirable results of concern here : (1) no collective term is made available for those names (whether specific or subspecific) of lesser rank than the genus (and subgenus) ; and (2) the assigned meaning of " binomial nomenclature " (i.e., a system of nomenclature involving two ranks—the genus on the one hand and the species or species with subspecies on the other hand) is rendered inconsistent with the definition of binomen. These two points are discussed hereinafter.

I

3. Any systematist who considers the pros and cons of the specific vs. subspecific rank of any named populations is faced with the inconsistent necessity of referring either to " subspecific " (as opposed to " specific ") names, or to " binomina " (as opposed to " trinomina "), when actually the rank of the population is open to question. Some term not explicitly indicative of rank is essential for use in such situations wherein specific or subspecific rank is indeterminate.

4. A second advantage in provision of a collective term for specific and subspecific names is brevity, since a single word will suffice in many cases otherwise requiring three words (" specific and subspecific ").

5. The proper collective term for specific and subspecific names is not immediately evident. " Trivial name " has the advantage of considerable usage in recent years, but some systematists have expressed dislike on the basis of different original meaning and the discrepancy between the special meaning in taxonomy and the belittling connotation of more general usage (see Mayr, Linsley and Usinger, 1953, Methods and Principles of Systematic Zoology, p. 247). If a more suitable name cannot be coined for or cannot be assigned the special meaning here required, then the term " trivial name " merits revival in taxonomic procedure. Certainly the complete elimination of any collective term is not the logical sequel of admission of the belittling ring of the term " trivial name ". Terms worthy of consideration as alternatives for the term "trivial name" may reasonably include "prenomen", "qualifying name ", " *nomen qualis* ", " secondary name ", " infrageneric name ", " specific name ", and no doubt others. Ambiguity eliminates " specific name " from further consideration. Unfortunately coinage or limitation of other terms may be more difficult to agree upon than acceptance of the term " trivial name ".

II

6. On reasonable and well-accepted grounds a substitute term (" binomen ") was adopted in place of the ambiguous term " specific name " by the International Commission at the 14th International Congress of Zoology in 1953. Unfortunately, however, the term selected conflicts with that adopted earlier (1948) in the form of " binominal nomenclature " in place of the term " binary nomenclature " The conflict lies in the fact that the term " binomen " clearly refers to a two-name taxon consisting of a generic and a specific name, whereas " binominal " or " binary " nomenclature refers (by arbitrary official restriction) to a two-group name with its presently (1953) approved meaning, then a reversion to " binary " or " binomial " in reference to the two-group-name system of nomenclature seems preferable, not only on a basis of consistency of

meaning, but also because virtually every general text uses the term " binomial " or " binary " in reference to the epochal standardization beginning with Linnaeus of biological nomenclature as a two-group-name system of nomenclature. It is, of course, understood in utilization of the terms " binomial " or " binary " in this context, that where desirable either or both of the groups in the two-group-name system of nomenclature may be subdivided into two subgroups (the generic name supplemented with a subgeneric name, the specific name with a subspecific name). The long-established and clearly proper understanding of " binomial " or " binary " (generally the former) in general biological literature would seemingly outweigh any other considerations pertaining to official recognition of the terms by the International Commission.

III

7. In accordance with the preceding discussion, it is hereby requested that the International Commission on Zoological Nomenclature reconsider the problems of (a) official adoption of a collective term for species and subspecies ; and (b) reinstatement of the term " binary nomenclature " or " binomial nomenclature " in place of " binominal nomenclature " in the general sense of Articles 25 and 26, as a move to establish consistency with the officially adopted term " binomen " and with the virtually universal practice in general accounts of elementary zoology.

DOCUMENT 64/2

DRAFT " REGLES ", ARTICLE 4 ; COMMENT ON PROFESSOR HOBART M. SMITH'S PROPOSAL FOR THE REVIVAL OF THE TERM " TRIVIAL NAME "

(Commission Reference : Z.N.(S.) 1362)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

Professor Hobart M. Smith's paper (Document 64/1) draws attention to the need for a collective term to cover the categories " species " and " subspecies ", but in proposing to revive the term " trivial name " in this sense, he gives it a meaning different from that attributed to it by the Paris Congress (*Bull. zool. Nomencl.* **4** : 128). As then defined, the term " trivial name " had no independent existence but was always to be qualified either by the adjective " specific " (indicating the second term of a binominal combination) or " subspecific " (indicating the third term of a trinominal combination). Arguments can be adduced both for the revival and for the continued suppression of the term, but its revival by the London Congress, five years after its suppression by the Copenhagen Congress which in turn followed only five years after its adoption at Paris, would give an impression of vacillation and infirmity of purpose.

2. The need expressed by Professor Smith can be met in a simple way by the extension of the idea of groups of taxonomic categories first introduced by the Copenhagen Congress when it established the Family-group and the Order/Class-group. Moreover the need for a collective term to cover species and subspecies is not greater than the need for a similar term to cover genera and subgenera. The recognition of a genus-group and a species-group of categories would thus solve both questions. These groups may be defined as follows :—

> Genus-group : The genus-group shall be defined as including the categories genus and subgenus and optional categories below family-group level which include groups of units of the species-group. All categories in the genus-group are to be defined by reference to a type-species.

Species-group : The species-group shall be defined as including the categories species and subspecies and other optional categories above the level of infra-subspecies. All categories in the species-group are to be defined by reference to a type-specimen (holotype, lectotype or neotype).

3. The terms " genus-group name " or " species-group name " will be found useful in discussions such as those mentioned by Professor Smith in paragraph 3 of his paper, when it is the attribution of a unit to a taxon or to a subtaxon that is in question, as well as in discussions of a nominal unit that has been variously referred to a taxon and to a sub-taxon by previous workers.

4. In paragraph 6 of his paper, Professor Smith discusses the conflict between the term " binomen " (meaning a name consisting of two words of which one is the generic and the other the specific name of a particular taxon) and the term " binominal nomenclature " (meaning a system of nomenclature wherein the names consist of two components, one component being a name or names in what is here called the genus-group and the other component being a name or names in what is here called the species-group). It is, however, difficult to see in exactly what particulars the alleged conflict exists, for the zoological interpretation of the term " binominal nomenclature " permits the use of two words in the genus-group component of a binomen (namely the generic name and the subgeneric name) as well as the use of two words in the species-group component (namely the specific name and the subspecific name). Thus although a binomen must consist of not more than two words of which one must be a generic (*sensu stricto*) and the other a specific (*sensu stricto*) name, names that are trinominal or quadrinominal can still be treated as conforming in all respects to the requirements of binominal nomenclature. Thus the provision sought by Professor Smith for the subdivision of both the genus-group component and the species-group component of a binominal name is already in existence. Professor Smith's proposal to resuscitate the term " binary " and to give it a meaning distinct from the meaning attached to the term " binominal " must surely be regarded as ill conceived in view of the Secretary's masterly and convincing proof of the identity of meaning of these two terms for all purposes of zoological nomenclature (*Bull. zool. Nomencl.* 5 : 152–167).

5. There is still, however, a possible double usage of the term " binominal " (i) in the broad sense as embracing binomina, trinomina and quadrinomina, and (ii) as the adjective meaning " of or pertaining to a binomen ". It is in this latter sense that the term is used in Article 4, Section 2 of Professor J. Chester Bradley's draft English text of the Rules. If it is desired to have different words for the expression of these two meanings, then the term " binominal " should certainly be attached to the first of the two ; for the term " binominal nomenclature " is by now so fundamental in the primary understanding of zoological nomenclature that its application ought always to be on the broadest possible basis. In the particular case of draft Article 4, Section 2, the use of the word " binominal " in a more restricted sense can easily be avoided if the sentence in question is altered to read (by analogy with Section 1 of the same Article) " The scientific name of a species is a binomen ". Section 3 of this Article can also be amended to read " The scientific name of a subspecies is a trinomen ".

6. The attention of the Colloquium is now directed to the need for distinguishing between two kinds of trinomina and two kinds of quadrinomina. According to both the Berlin Code and to Professor Bradley's draft, the term " trinominal " applies to the name of a subspecies, so that the term " trinomen " ought to apply only to a name consisting of three words of which the first is a generic name and the other two are species-group names, being respectively a species name and a subspecific name. There are, however, very many three-word names of which the first two words are genus-group names, being respectively a generic and a subgeneric name, and the third word a specific name. Names of this sort of construction are perhaps more commonly met with in palaeontology than in neontology, but in the former discipline they are numerous and important. If the proposal outlined in paragraph 2 above for the recognition of the genus-group and species-group of names is approved, then clearly a distinction should be drawn between the two converse kinds of three-word names just defined. It will obviously be helpful if the words used as names for each sort are readily distinguishable, and fortunately a word of Greek origin—trionym—is available with the same basic meaning as the word trinominal which is of Latin origin. It is therefore suggested that the term " trionym " be introduced for three-word names consisting of a generic name, a subgeneric name and a specific name. According to the Oxford English Dictionary the word has already been used to denote " a trinominal name in botany and zoology " and an adjective " trionymal " is also recorded. It is thought, however, that the adjectival form " trionymous " is not only more euphonious but also involves less risk of confusion with " trinominal ", besides being analogous in form with " homonymous ", " synonymous ", " anonymous " and " eponymous ".

7. A precisely similar case exists as regards four-word names. According to Professor Bradley's draft, Article 4, Section 4(b), quoting a Paris decision, the term " quadrinominal " is applied to the names of infrasubspecific forms, that is, to names consisting of a generic name, a specific name, a subspecific name and an infrasubspecific name. Another kind of four-word name, again perhaps more frequently met with in palaeontology, is one that consists of a generic name, a subgeneric name, a specific name and a subspecific name. In other words, the first kind of four-word name consists of one genus-group name, two species-group names and an infra-subspecific name, whereas the second kind consists of two genus-group names and two species-group names. For this second sort, the term " tetronym " (of Greek origin ; adjective " tetronymous ") is suggested.

8. It is therefore proposed that the following alterations be made in draft Article 4 of the Rules :—

(i) Section 2 shall read " The scientific name of a species is a binomen. The combination of a specific name with a generic name and a subgeneric name is a trionym ".

(ii) Section 3 shall read " The scientific name of a subspecies is a trinomen. The combination of a subspecific name with a generic name, a subgeneric name and a specific name is a tetronym ".

CASE No. 65

DRAFT "REGLES", ARTICLE 29, SECTION 6(c), PROPOSAL FOR REWORDING OF

DOCUMENT 65/1

(Commission Reference : Z.N.(S.) 1365)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

The resolution adopted by the International Congress of Zoology at Monaco, 1913, giving the International Commission Plenary Powers to "suspend the *Règles* as applied to any given case, for the purpose of preventing confusion and of promoting a stable and universally accepted nomenclature" was not written into the *Règles* by that or any subsequent Congress prior to the 1948 Paris Congress. Up to that time it was quite appropriate that an instrument for suspending the *Règles* should be separate from the code itself. Once the resolution had been included in the code, however, the position immediately became illogical, since no code can contain a clause annulling the code itself; for all of the parts must be subordinate to the whole.

2. Furthermore, the phrase "suspend the *Règles*" carries a derogatory connotation which is quite inappropriate to the present circumstances. It implies that those who apply for the use of the Plenary Powers are in some way in the wrong and are, as it were, copying a practice common in the English courts of law, of admitting to one offence so that a number of others can be taken into consideration, in the hope that the sum total of the individual penalties will be diminished. If the sole function of the Commission were to administer a draconic code of laws in a narrow and legalistic way, the picture presented might be a proper one. In fact, however, the prime purpose of the *Règles* is to provide a stable and uniform nomenclature, and the Commission should clearly pay greater regard to the spirit than to the letter of the law. Experience has proved conclusively that the Plenary Powers are not a means of cheating justice, but are in fact one of the most potent weapons in the fight for a stable and uniform nomenclature.

3. Since the Plenary Powers have been unable, since the incorporation of their defining instrument into the code, to suspend the *Règles* of which they form a part, it is satisfactory to note that the phrase " suspend the *Règles* " has not been used in applications to the Commission for the use of these powers, and that these applications, and the *Opinions* in which their success or failure is recorded, now ask for the use of the Plenary Powers to produce a positively favourable result or to prevent the unfavourable consequences of some action. Now that a major codification is in progress, it may well be felt that the wording that has become customary is too empirical and not sufficiently clear as to what kind of action it is, if not suspension of the *Règles*, that the Plenary Powers are designed to take. It is clear that this action consists of varying the application of the relevant part of the *Règles* to the particular case under discussion.

4. It has also been noted that Professor Bradley has consistently used the phrase " Plenary Power " in his draft English text, although the spelling used in the official records of both the Paris and Copenhagen Congresses, and in all the publications of the Commission in the last ten years, is " Plenary Powers". Whatever term is finally adopted as the one to be entered in the *Règles*, it should clearly be one that will convey the flexibility with which the Commission is empowered to act, in suspending one or more than one enactment of the *Règles* in a particular case, or in issuing a *Direction* modifying or completing a pre-existing *Opinion*. A plural form is, from this point of view, obviously to be preferred to a singular form. Moreover, the term " Pleins Pouvoirs " has for many years been customary in all diplomatic intercourse, where French is the standard language and has been adopted by the French zoologists in preparing the draft French substantive text to be considered by the Colloquium simultaneously with the draft English substantive text. It is therefore proposed that the Colloquium adopt the term " Plenary Powers " as the official term in all relevant passages of the *Règles*.

5. It is therefore proposed :—

(i) That the first sentence of paragraph (c) of Section 6 of Article 29 of the draft English text of the *Règles* be altered to read " (c) Plenary Powers.—The Commission, acting on behalf of the International Congresses of Zoology, shall have Plenary Powers to vary any Rule the application of which to any particular case would disturb stability or cause confusion."

(ii) That the phrase " Plenary Powers " be inserted in place of " Plenary Power " wherever the latter phrase is found in the draft English text of the *Règles*.

6. It is further suggested that the " Note of Guidance " to authors wishing to invoke the Plenary Powers should contain words requesting authors to indicate in their applications to the Commission the particular clause or clauses in the *Règles* that they wish to have varied in any given case.

CASE No. 66

THE RELATIVE MERITS OF THE ADJECTIVES "NOMENCLATORIAL" AND "NOMENCLATURAL" FOR USE IN THE ENGLISH TEXT OF THE "RÈGLES"

Commission Reference : Z.N.(S.) 1261

DOCUMENT 66/1

Views of **J. CHESTER BRADLEY**

(*Cornell University, Ithaca, N.Y., U.S.A.*)

(Letter to the Secretary dated 13th September 1957)

The term "nomenclatural" is another term that differs from what you have been accustomed to employ, and I wish to explain why I have used it. The definitions of "nomenclatorial" and of "nomenclatural" in three dictionaries is as follows :

Standard Dictionary

nomenclatorial, a. Pertaining to nomenclature or naming.

nomenclatural, under the noun nomenclature, nomenclatural is given without definition as the normal adjective form.

Webster's Dictionary

nomenclatorial, not included in Webster.

nomenclatural, a. Pertaining or according to a nomenclature.

Oxford Dictionary

nomenclatorial, a. rare. In connection with, in relation to nomenclature.

nomenclatural, a. Relating to or concerned with nomenclature.

From these definitions it is clear that " nomenclatural " is the straightforward adjective form, certain to be found in lexicons that translate English words to any foreign language, and that " nomenclatorial " is a rare word not even appearing in one of the three dictionaries, and very unlikely to occur in lexicons translating English into a foreign language.

" Nomenclatorial " could be easily misunderstood to mean " pertaining to nomenclators ".

" Nomenclatural " is the shorter, simpler word, and for that reason would be preferable if all other things were equal.

DOCUMENT 66/2

Views of **FRANCIS HEMMING**

(*Secretary to the International Commission*)

(Letter to J. Chester Bradley dated 23rd September 1957)

I write to thank you for your letter of 13th September on the relative merits of the adjective " nomenclatural " versus " nomenclatorial " in which you explain your reasons for adopting in your draft of the English text of the *Règles* the word " nomenclatural ". This is a case where the difference between two competing words having the same meaning is due to differences of usage in England and the U.S.A. respectively, and neither spelling is therefore correct in the sense that it alone is the correct spelling and every other spelling is incorrect.

Which spelling would be the more appropriate to include in the official English text of the *Règles* to be adopted by the Congress next year will be a matter for discussion at that Congress.

CASE No. 67

EXISTING " REGLES " : ACTION PROPOSED TO BE TAKEN BY THE LONDON (1958) CONGRESS FOR THE PURPOSE OF CONSOLIDATING IN THE REVISED " REGLES " THE PROVISIONS APPEARING IN SECTION " F " OF THE " APPENDICE " TO THE EXISTING " REGLES "

(Commission Reference : Z.N.(S.) 1343)

DOCUMENT 67/1

By **L. W. GRENSTED,** M.A.

(*Conculting Classical Adviser to the International Commission on Zoological Nomenclature*)

[Introductory Note by the Assistant Secretary : The original Section F of the *Appendice* to the *Règles* was not considered in detail by the Paris (1948) Congress, a proposal relating to the transliteration of the Latin letters " v " and " i " being postponed. This matter was considered at the Copenhagen (1953) Congress, which ruled (*Copenhagen Decisions* : 83, Decision 163) that the Latin letter " v " should be written as a " u " before a consonant and as a " v " before a vowel ; and that the Latin letter " i " should be written as an " i " before a consonant and as a " j " before a vowel.

2. On 2nd January 1958 Professor J. Chester Bradley wrote to the Secretary of the International Commission saying that he had not considered it part of the task assigned to him at Copenhagen to take any decision about the incorporation of the provisions contained in the old *Appendice* into his new draft of the *Règles*. The Secretary thereupon undertook to prepare proposals relating to Sections A to E of the *Appendice* and asked Professor L. W. Grensted to deal with Sections F and G in separate papers, taking note, so far as Section F was concerned, of a paper by Professor Bonnet (*Bull. zool. Nomencl.* **3** : 199). After these arrangements had been made, Professor Bradley sent his own suggestions concerning Section F direct to Professor Grensted, but later (31st March 1958) expressed his satisfaction with the measures already taken to procure a revision of this Section from Professor Grensted.

3. Professor Grensted's proposal follows. It is proposed that Section F of the *Appendice* to the existing *Règles* be deleted and that the following document be inserted as a Schedule to Article 28 of the draft English text of the *Règles*.]

SCHEDULE

Transliteration and Latinization of Greek words

When a Greek word is transliterated its letters are given their exact equivalents. When it is Latinized it is given the form which is determined by the usage of classical Latin or, where that differs, of modern scientific Latin. The following Schedule illustrates the correct procedure.

The Greek Alphabet, Aspirated Letters and Diphthongs, with Latin Equivalents and Mode of Latinization

ALPHABET AND ASPIRATED LETTERS					
Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
A α	alpha	a	a	ἄναξ	*A*nax
ʽ*A* ἁ			ha	ἁβρός	in *Ha*brobracon
B β	beta	b	b	βάλανος	*B*alanus
Γ γ	gamma	g	g	γλῶσσα	in *G*lossina
γγ		gg	ng	ἄγγος	in A*ng*iospermia
γκ		gk	nc	ἄγκιστρον	in A*nc*istrodon
γξ		gx	nx	σάλπιγξ	Salpi*nx*
γχ		gch	nch	ἄγχι	in A*nch*isaurus
Δ δ	delta	d	d	δυνάστης	*D*ynastes
E ϵ	epsilon	ĕ	e	ἐλατήρ	*E*later
ʽ*E* ἑ			he	ἕλιξ	*He*lix
Z ζ	zeta	z	z	ζῶον	in Protozoa
H η	eta	ē	e	ἠώς	in *E*ohippus
(final) η		e	a	γλήνη	in Euglen*a*
ʽ*H* ἡ			he	ἧλος	in *He*loderma
Θ θ	theta	th	th	θρίψ	*Th*rips

Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
I ι	iota	i	i	ἰχνεύμων	*I*chneumon
			or j	ἰωάννης	in *J*oannisia
‘*I* ἱ			hi	ἵππος	in *Hi*ppocampus
K κ	kappa	k	c	κύπρις	*C*ypris
Λ λ	lambda	l	l	λεπίς	in *L*epidoptera
M μ	mu	m	m	μύρμηξ	*M*yrmex
N ν	nu	n	n	ναυτίλος	*N*autilus
Ξ ξ	xi	x	x	ξένος	in *X*enotoma
O ο	omicron	o	o	ὀρθὸς	in *O*rthoptera
‘*O* ὁ			ho	ὅμος	in *Ho*moptera
(final) ον		on	um	ῥυγχίον	Rhynchi*um*
(final) ος			us	βόμβος	Bomb*us*
Π π	pi	p	p	παρά	in *P*aramoecium
P ρ	rho	r	r	πτερόν	in Hemipte*r*a
‘*P* ῥ			rh	ῥέα	*Rh*ea
ρρ		rr	rrh	πυρρός	in Pyr*rh*omutilla
Σ σ, ς	sigma	s	s	σφίγξ	*S*phinx
T τ	tau	t	t	τέττιξ	*T*ettix
Υ υ	upsilon	u	y	βόμβυξ	Bomb*y*x
‘*Υ* ὑ			hy	ὕδρα	*Hy*dra
Φ φ	phi	ph	ph	φύλλον	in *Ph*ylloxera
X χ	chi	ch	ch	χιτών	*Ch*iton
Ψ ψ	psi	ps	ps	ψυχή	*Ps*yche
Ω ω	omega	o	o	ὠκύπους	*O*cypus
‘*Ω* ὡ			ho	ὥρα	as in *Ho*riostomella

DIPHTHONGS

Greek letter	Name	Latin equivalent	Latinized as	Example	Latinized as
AI αι		ai	ae	ταινία	*Tae*nia
AI‘ αἱ			hae	αἷμα	in *Hae*matopota
AΥ αυ		au	au	αὖλαξ	in *Au*lacus
EI ει		ei	i	χείρ	in Ch*i*roptera
EΥ ευ		eu	eu	εὖ	in *Eu*menes
			(or ev)	εὐαγής	in *Ev*agetes
EΥ‘ εὑ			heu	εὑρίσκω	as in *Heuretes*
OI οι		oi	oe	οἶστρος	*Oe*strus
OΥ ου		ou	u	πούς	in Platyp*u*s
ῼ ῳ		o(i)	o	ᾠόν	in Ootypus

The remaining diphthongs are unimportant in zoological nomenclature.

Notes

(1) The sign ‘ placed over a vowel or rho, or before a capital or after a capitalized diphthong, is represented in Latin by the letter h. The reversed sign ’, placed over a vowel, is silent and is disregarded.

(2) When rr (ρρ) occurs in the middle of a Greek word it becomes rrh on Latinization. Thus πυρρός becomes Pyrrhus.

(3) Of the two Greek forms of s, σ is used in the middle of a word and ς at the end only.

(4) The three long vowels written with iota subscript, ᾳ, ῃ, ῳ, are in principle diphthongs, but the iota is normally ignored in Latinization. The only important case in taxonomy is in the words derived from ᾠόν, an egg, which are always formed as in *Ootypus*, *Oodes*.

(5) In Latin, but not in Greek, the vowels u and i are also used as consonants. It has become customary to represent u by v, which appears whenever the Latin u is followed by a vowel, as in " Evander ", " evangelize ". This principle is varied whenever euphony demands, especially when eu, representing the Greek εὖ, is followed by the vowel o, as in Euomphalus, Euonymus. Similarly in modern Latin an initial I is usually written J.

(6) The substitution of " a " for the final η is the substitution of the Latin feminine nominative singular case-ending of the -a stem declension (first declension) for the Greek ending. Similarly in the o-stem declension (second declension) the Latin masculine nominative singular case-ending " us " is substituted for the Greek " ος ", and the neuter ending " um " for the Greek " ον ".

This brings the nouns into better conformity with normal Latin usage. It is advisable to do this in coining new names, but there are many instances in which such Greek words have been taken over into Latin unchanged, e.g., Cyrene, Pelion. Similarly in Neo-Latin we have many such zoological names as Ennomos from ἔννομος and Theridion from θηρίδιον

There are also many cases where the nominative case-endings of Greek nouns of other declensions have been unnecessarily altered, even changing the gender and declension (and therewith the stem) in forming zoological names. Thus words ending in κέρας, a third declension neuter, are normally Latinized as " -ceras " (e.g., Calliceras). But in *Trichocera*, the first declension case-ending -a has been substituted for the Greek ending, changing not only the gender and declension, but also the stem itself, which now ends in -a instead of -at. In *Heterocerus*, similarly, a second declension masculine ending has been used, and the stem of that word ends in -o. These are not examples of the Latinization of κέρας but of the creation of wholly new words, as, of course, an author has the right to do.

CASE No. 68

DRAFT " REGLES ", MISCELLANEOUS PROVISIONS : PROPOSED INCORPORATION IN, OF PROVISIONS PROMULGATED IN " DECLARATIONS " RENDERED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE IN THE PERIOD BETWEEN THE COPENHAGEN CONGRESS OF 1953 AND THE COMING LONDON CONGRESS

(Commission Reference : Z.N.(S.) 1366)

DOCUMENT 68/1

Report on the " Declarations " rendered by the International Commission on Zoological Nomenclature in the period between the Copenhagen (1953) and London (1958) Congresses : Report prepared under the procedure prescribed by the Paris (1948) Congress

(Report dated 27th May 1958)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

I. INTRODUCTORY

The present Report is concerned with the twenty-four *Declarations* (being *Declarations* 18 to 41) rendered by the International Commission on Zoological Nomenclature since the close of the Copenhagen Congress in 1953. This Report has a twofold purpose, namely : (1) to provide the Commission with the material needed to enable it to prepare for the consideration of the coming (London) Congress the Report which it is required to submit to that body under the procedure prescribed by the Paris (1948) Congress (1950, *Bull. zool. Nomencl.* **4** : 136–137) ; (2) to submit proposals as to the manner in which the provisions in the foregoing Declarations should be incorporated into the revised text of the *Règles*.

The arrangement adopted in the preparation of the present Report is as follows. First, each *Declaration* is quoted, with a bibliographical reference to its position and date of publication in the *Opinions and Declarations* of the International Commission on Zoological Nomenclature ; in each case a brief historical note is appended explaining the origin of the *Declaration* in question. Secondly, after all the *Declarations* have been catalogued, tables are given showing which Article of the *Règles Internationales de Nomenclature Zoologique* is affected by each *Declaration*. In these tables there is also shown the place in the new Draft English Text of the *Règles* where each *Declaration* is to be assimilated. This Draft English Text has been prepared by Professor J. Chester Bradley, President of the International Commission on Zoological Nomenclature for adoption by the Section on Nomenclature of the Fifteenth International Congress of Zoology. As will be seen, five of the *Declarations* in the series considered have not been considered by Professor Bradley in his Draft ; in addition, eight *Declarations* have been published since the sending to the printer of Professor Bradley's draft as Parts 1–9 of Volume 14 of the *Bulletin of Zoological Nomenclature*. In all these thirteen cases, therefore, it has been necessary to indicate in the fourth Section of this report, where, in the opinion of the International Commission, the *Declarations* referred to should be assimilated into the Draft *Règles*. Finally, a recommendation is submitted that a formal request be made by the Commission to the International Congress for the adoption of these twenty-four *Declarations* as integral parts of the *Règles Internationales de Nomenclature Zoologique* in the manner, and at the points indicated, in the immediately preceding section of this Report.

II. CATALOGUE OF " DECLARATIONS " 18–41

DECLARATION 18

(*Ops. Decls. int. Comm. zool. Nomencl.* 6 : i–xx, 6th December 1954)

ADOPTION OF RULES RELATING TO THE MAKING OF ENTRIES ON THE " OFFICIAL LIST OF FAMILY-GROUP NAMES IN ZOOLOGY " AND ON THE " OFFICIAL INDEX OF REJECTED AND INVALID FAMILY-GROUP NAMES IN ZOOLOGY "

DECLARATION :—In pursuance of the Directive issued by the Fourteenth International Congress of Zoology, Copenhagen, 1953, that every family-group name which in any of its *Opinions* the International Commission on Zoological Nomenclature may accept as a valid name shall be entered on the *Official List of Family-Group Names in Zoology* and that every such name which the Commission may similarly reject or declare to be invalid shall be entered on the *Official Index of Rejected and Invalid Family-Group Names in Zoology*, it is hereby directed that the making of entries on the foregoing *Official List* and *Official Index* shall be subject to the following Rules :—

(1) Every entry of a family-group name on the *Official List of Family-Group Names in Zoology* is to include, in addition to a full bibliographical reference for the family-group name concerned, the name of the type genus of the family-group concerned, the name of the author of the name of that genus and its date of publication, but is not to include bibliographical references in respect of that generic name, since in every case the generic name in question, if not already on the *Official List of Generic Names in Zoology*, is to be placed on that *List* at the same time that the family-group name in question is placed on the *Official List of Family-Group Names in Zoology* and the requisite bibliographical references in respect of that generic name will be included in the entry in relation thereto made on the *Official List of Generic Names in Zoology*.

(2) Where a family-group name based upon a generic name consisting of a word of Greek or Latin origin was originally published in a form contrary to that prescribed in Decision 50(1)(a) taken by the Fourteenth International Congress of Zoology (1954, *Copenhagen Decisions zool. Nomencl.* : 34) and where in consequence it has been necessary, under Decision 50(1) (b) of the foregoing Congress (1954, *ibid.* : 34–35), to correct the spelling originally employed, the family-group name in question, on being placed on the *Official List of Family-Group Names in Zoology*, (i) shall be attributed to the author by whom it was published in an incorrect form, (ii) shall rank for priority as from the date on which it was so published, but (iii) shall be entered on the *Official List* in its corrected form with a statement as to the incorrect form in which it was originally published and with particulars as to the author by whom the incorrect form was corrected, and the date on which, and the place where, that correction was published.

(3) The Rules prescribed in (1) above regarding the form of notation to be adopted in entering a family-group name on the *Official List of Family-Group Names in Zoology* shall apply also to the notation to be adopted in entering a name belonging to the foregoing category on the *Official Index of Rejected and Invalid Family-Group Names in Zoology.*

(4) Where there is any reasonable doubt as to whether a given family-group name was published as a new name or merely as a record of a previously published name based upon the same generic name, that name shall be entered on the *Official Index of Rejected and Invalid Family-Group Names in Zoology* as being a junior homonym of the earlier published name.

Historical Note : This *Declaration* is the result of certain difficulties that were encountered in applying certain of the decisions in regard to family-group names taken by the Copenhagen (1953) Congress, namely (i) the difficulty of ascertaining where a family-group name was first published ; (ii) the difficulty of determining whether a family-group name is not only the oldest available such name based upon the name of the type-genus concerned but is also the oldest family-group name for any genus subjectively associated on taxonomic grounds with the family-group taxon concerned ; (iii) the notation to be adopted for entries of family-group names on the *Official List* of names of that group ; (iv) the notation to be adopted in these entries of names originally published in an incorrect form ; (v) the notation to be adopted for entries of family-group names on the relevant *Official Index of Rejected and Invalid Names* ; and (vi) the notation to be adopted for entries on the *Official Index* in cases where it is not clear whether or not a given name was published as a new name.

DECLARATION 19

(*Ops. Decls. int. Comm. zool. Nomencl.* 6 : xxi–xl, 6th December 1954)

ADOPTION OF RULES RELATING TO THE MAKING OF ENTRIES ON THE " OFFICIAL LIST OF SPECIFIC NAMES IN ZOOLOGY " AND ON THE " OFFICIAL INDEX OF REJECTED AND INVALID SPECIFIC NAMES IN ZOOLOGY "

DECLARATION :—In pursuance of the Directive issued by the Thirteenth International Congress of Zoology, Paris, 1948, that every specific name which in any of its *Opinions* the International Commission on Zoological Nomenclature may accept as a valid name shall be entered on the *Official List of Specific Names in Zoology* and that every such name which the Commission may similarly reject or declare to be invalid shall be entered on the *Official Index of Rejected and Invalid Specific Names in Zoology*, it is hereby directed that the making of entries on the foregoing *Official List* and *Official Index* shall be subject to the following Rules, supplementary to the Rules in regard thereto prescribed by the foregoing Congress as specified in the Official Record of the Proceedings of the Commission in Conclusion 42 of the Ninth Meeting held by it during its Paris Session (1950, *Bull. zool. Nomencl.* 4 : 270–272), as amplified in Conclusion 20 of its Twelfth Meeting and Conclusion 61 of its Fourteenth Meeting during that Session (1950, *ibid.* 4 : 334 and 627–628 respectively) :—

(1) In order to minimise the risk (a) that through inadvertence the entry on the *Official List of Specific Names in Zoology* of a specific name in connection with the generic name in combination with which it was originally published might be misinterpreted as indicating that approval had thereby been given not only to the specific name in question but also to the combination in which that name was cited in the foregoing *Official List*, or (b) that the insertion of a name on the foregoing *Official List* might be misinterpreted as implying that the taxon so named is to be regarded as a distinct species to the exclusion of the possibility of its being regarded as a subspecies of some other species, the following Warning Notice shall be printed in bold type at the head of each page of the said *Official List* : " (1) The generic name cited in connection with each specific name inscribed on the *Official List of Specific Names in Zoology* is the generic name in combination with which the specific name in question was originally published. The citation of that generic name carries no implication on the question of the name of the genus to which on taxonomic grounds the species in question should be referred. (2) Similarly, the insertion of a name

on the foregoing *Official List* involves no implication on the question whether the taxon so named should on taxonomic grounds be regarded (a) as a distinct species or (b) as a subspecies of some other species."

(2) The entry to be made when a specific name is inscribed on the *Official List of Specific Names in Zoology* shall consist of the following items arranged in the order specified below and separated from one another by commas : (a) the specific name so placed on the *Official List* ; (b) the generic name in combination with which that specific name was originally published ; (c) the name of the author of the specific name : (d) the date of publication of that specific name : (e) the full bibliographical reference for that name. *Example* : When, as has already been decided shall be done, the specific name (*machaon*) of the Common European Swallowtail Butterfly, which was originally published in the combination *Papilio machaon*, is inscribed on the *Official List of Specific Names in Zoology*, the entry to be so made shall be as follows :—" *machaon, Papilio*, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 462 ".

(3) Wherever in an application published in the *Bulletin of Zoological Nomenclature* a specific name proposed for addition to the *Official List of Specific Names in Zoology* is cited without a bibliographical reference, the citation shall consist of the specific name in question, the name of the author of the specific name and its date of publication, followed by the words " as published in the combination ", whatever that combination may have been. *Example* : " the specific name *machaon* Linnaeus, 1758, as published in the combination *Papilio machaon* ".

(4) Wherever in a Ruling given in an *Opinion* or *Direction* rendered by the International Commission on Zoological Nomenclature directions are given that a given specific name shall be placed on the *Official List of Specific Names in Zoology* and the bibliographical reference for that name is not cited in that Ruling, the specific name in question shall be cited in like manner as that prescribed in (3) above.

(5) The Rules specified in (2), (3) and (4) above in relation to the entry or proposed entry of a specific name on the *Official List of Specific Names in Zoology* shall apply also to the entry or proposed entry of any given specific name on the *Official Index of Rejected and Invalid Specific Names in Zoology.*

Historical Note : This *Declaration* was proposed in order to decide the form of notation to be adopted in making entries in the *Official List of Specific Names in Zoology* and in the *Official Index of Rejected and Invalid Specific Names in Zoology*. It was decided to adopt a standard form of notation of which the following is an actual example :—

machaon, Papilio, Linnaeus, 1758, *Syst. Nat.* (ed. 10) **1** : 462

It will be noted that this form of notation is the same as that adopted by C. D. Sherborn in his *Index Animalium*.

DECLARATION 20

(*Ops. Decls. int. Comm. zool. Nomencl.* **10** : i–viii, 14th July 1955)

CLARIFICATION OF THE STATUS OF A FAMILY-GROUP NAME WHERE THE NAME OF THE TYPE GENUS OF THE TAXON SO NAMED IS SUPPRESSED UNDER THE PLENARY POWERS

DECLARATION :—Where the name of a genus which is the type genus of a taxon of the family-group is suppressed by the International Commission on Zoological Nomenclature under its Plenary Powers, the decision so taken is to apply equally to the family-group name based upon the generic name in question.

Historical Note : This *Declaration* was proposed in order to generalise the action taken in a particular case. In *Opinion* 305 (*Ops. Decls. int. Comm. zool. Nomencl.* **8** : 297–312), the generic name *Ammonites* Bruguière, 1789 was placed on the *Official Index of Rejected and Invalid Generic Names in Zoology* and the generic name *Arietites* Waagen, 1869 was at the same time added to the *Official List of Generic Names in Zoology*. When, later, the question of the family-group names involved in this case came to be considered, it was found that there were family-group names based on both the generic names involved. It was decided in *Direction* 14 (*op. cit.* **10** : 463–480) to suppress the names in this category based on the generic name *Ammonites* and to add that based on the generic name *Arietites* to the *Official List of Family-Group Names in Zoology*. This action was clearly justified because it prevented the revival at the family-group level of the controversy which had aroused bitter and intense feelings among the specialists concerned, and which had been settled at the generic-name level by the decision taken in *Opinion* 305.

DECLARATION 21

(*Ops. Decls. int. Comm. zool. Nomencl.* **12** : i–viii, 19th June 1956)

CLARIFICATION OF THE INTERPRETATION OF ARTICLE 30 OF THE "REGLES" REGARDING THE SPECIFIC NAME TO BE ACCEPTED AS THE NAME FOR THE TYPE SPECIES OF A GENUS WHERE THAT SPECIES HAS TWO OR MORE OBJECTIVELY SYNONYMOUS SUCH NAMES

DECLARATION :—Where one of two or more objectively identical nominal species is designated, indicated or selected as the type species of a genus, that genus shall be cited as having as its type species the oldest established of the nominal species concerned.

EXAMPLE : The nominal species *Cancer gammarus* Linnaeus, 1758, and *Astacus marinus* Fabricius, 1775, are objectively identical with one another. The second, but not the first, of these nominal species was placed by Weber in his genus *Homarus* in 1795. *Astacus marinus* Fabricius, 1795, was the first of the originally included nominal species to be selected to be the type species of *Homarus* Weber. Since the name *Cancer gammarus* Linnaeus is (a) an available name and (b) a senior objective synonym of the name *Astacus marinus* Fabricius, the nominal species *Cancer gammarus* Linnaeus is to be treated as the type species of the genus *Homarus* Weber.

Historical Note : The purpose of this *Declaration* is to remove an anomaly in the existing *Règles*, Article 30, Rule (g) whereby any subsequent selection of a type-species for a nominal genus originally established without a type-species was not subject to change. *Declaration* 21 allows change in cases of this kind when the type-species by subsequent selection is an objective junior synonym of another nominal species.

DECLARATION 22

(*Ops. Decls. int. Comm. zool. Nomencl.* 12 : ix–xviii, 19th June 1956)

CLARIFICATION OF RULE (a) IN ARTICLE 30 IN RELATION TO THE STATUS THEREUNDER OF A DESIGNATION OF A TYPE SPECIES FOR A GENUS MADE AT THE TIME OF THE PUBLICATION OF THE GENERIC NAME CONCERNED WHEN THAT DESIGNATION OR SOME PART OF IT IS AMBIGUOUS OR IS QUALIFIED BY A MARK OF INTERROGATION

DECLARATION :—For the purposes of Rule (*a*) in Article 30 the expression " designate a type species " is to be rigidly construed and is not to be held to cover a designation made in an ambiguous or qualified manner.

Historical Note : This *Declaration* has the effect of adding to Rule (a) in Article 30 of the existing *Règles* the provision already incorporated in Rule (g) of that Article prescribing that the meaning of the phrase " select the type " is to be rigidly construed. This provision was thus extended from cases of subsequent selection of a type-species (Rule (g)) to cases of original designation of a type-species (Rule (a)). The problem arose out of an application submitted to the Commission by Professor F. C. Hottes in the case of the genus *Cinara* Curtis, 1835.

DECLARATION 23

(*Ops. Decls. int. Comm. zool. Nomencl.* 13 : i–xvi, 24th July 1956)

CLARIFICATION OF THE STATUS UNDER THE LAW OF HOMONYMY OF EACH OF THREE PAIRS OF SPECIFIC NAMES BASED, IN THE CASE OF THE NAMES COMPRISED IN EACH PAIR, UPON THE SAME GEOGRAPHICAL TERM AND DIFFERING FROM ONE ANOTHER ONLY IN SPELLING

DECLARATION :—The names comprised in each of the under-mentioned pairs of specific names are to be treated as homonyms of one another in any given genus in like manner as though the names concerned were identical with one another in spelling :—

(a) *saghalinensis* and *sakhalinensis* ;

(b) *sibiricus* and *sibericus* ;

(c) *tianshanicus* and *tianschanicus.*

Historical Note : This *Declaration* was adopted in order to clarify the general aspect of a particular case submitted by the Marquess Hachisuka relating to the name of two Japanese birds. The two nominal species concerned in this application bore the names *saghalinensis* and *sakhalinensis*, and the question to be answered was, whether these names were to be regarded as homonyms when the species in question were referred, on taxonomic grounds, to the same nominal genus. The Copenhagen (1953) Congress considered the general question and instructed the Commission to give rulings upon the relative status of such names under the Law of Homonymy when such names were submitted to it for a decision (*Copenhagen Decisions* : 81, Decision 158).

The Commission has given Rulings in two *Opinions* dealing with cases of the kind which *Declaration* 23 was intended to clarify. In the first of these (*Opinion* 402), *Picoides tridactylus sakhalinensis* Buturlin, 1907 and *Dryobates leucotos saghalinensis* Yamashina, 1931 were ruled to be homonyms when both taxa were placed in the genus *Picoides* Lacépède, 1799 ; and *Dendrocopus* (sic) *major tianshanicus* Buturlin, 1910 and *Picoides tridactylus tianschanicus* Buturlin, 1907 were also ruled to be homonyms when both taxa were placed in *Picoides.* In the second (*Opinion* 403) *Alauda sibirica* Gmelin, [1789] and *Tanagra siberica* Sparrmann, 1786 were ruled to be homonyms when both were referred to the genus *Melanocorypha* Boie, 1828.

DECLARATION 24

(*Ops. Decls. int. Comm. zool. Nomencl.* 13 : xvii–xxvi, 14th August 1956)

CLARIFICATION OF THE STATUS UNDER ARTICLE 25 OF THE " REGLES " OF A NAME FOR A TAXON PUBLISHED CONDITIONALLY AND MATTERS INCIDENTAL THERETO

DECLARATION.—(1) Where for a taxon of any category an author publishes a name conditionally, the name so published does not lose its status of availability by reason of being so published (amplification of a provision relating to the publication conditionally of specific names adopted by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 144–145, Decision 17(a)).

(2) The *Recommandation* deprecating the publication of specific names conditionally inserted in the *Règles* by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 144—145, Decision 17(b)) is hereby extended so as to apply also to the publication conditionally of names for taxa belonging to other categories.

Historical Note : This *Declaration* is self-explanatory. It extends to all taxonomic categories the provision relating to names published conditionally for species ; and expressly extends to cover names at all levels the *Recommandation* adopted at Paris condemning the publication of names conditionally, which already covered all names by implication.

DECLARATION 25

(*Ops. Decls. int. Comm. zool. Nomencl.* **13** : xxvii–xxxvi, 14th August 1956)

CLARIFICATION OF RULE (g) IN ARTICLE 30 IN RELATION TO THE SELECTION OF THE TYPE SPECIES OF A GENUS IN A CASE WHERE THE NOMINAL SPECIES SO SELECTED, THOUGH NOT ITSELF CITED AT THE TIME OF THE ESTABLISHMENT OF THE GENUS IN QUESTION, IS OBJECTIVELY IDENTICAL WITH ANOTHER NOMINAL SPECIES WHICH WAS SO CITED

DECLARATION :—Where two or more nominal species are objectively identical with one another (the two species being based upon the same type specimen, those names being in consequence objective synonyms of one another) and where one of those nominal species is one of two or more such species included in a nominal genus established prior to 1st January 1931, a later author is to be accepted as having made a valid type selection under Rule (g) in Article 30 if he so selects any of the objectively identical nominal species in question, irrespective of whether the nominal species so selected is that which was cited by the author of the generic name at the time when he established the nominal genus so named.

EXAMPLE : The nominal species *Astacus marinus* Fabricius, 1775, is objectively identical with the nominal species *Cancer gammarus* Linnaeus, 1758 (the name *marinus* being no more than a substitute name (*nom. nov.*) for the earlier published name *gammarus*). Accordingly, as Weber (1795) cited *Astacus marinus* Fabricius, 1775, as one of the species included in the genus *Homarus* Weber, 1795, the selection by a later author (Rathbun) of the objectively identical nominal species *Cancer gammarus* Linnaeus, 1758, as the type species of *Homarus* Weber, 1795, is a valid type selection for the purposes of Rule (g) in Article 30, notwithstanding the fact that that nominal species was not cited by Weber when he established the nominal genus *Homarus*.

Historical Note : The purpose of this *Declaration* will be immediately clear if it is read in conjunction with *Declaration* 21, since the two general issues involved arose out of the same individual case.

DECLARATION 26

(*Ops. Decls. int. Comm. zool. Nomencl.* **13** : xxxvii–l, 14th August, 1956)

CLARIFICATION OF THE EXPRESSION "MONOTYPICAL GENUS" FOR THE PURPOSES OF RULE (c) IN ARTICLE 30 OF THE "REGLES"

DECLARATION :—(1) The definition of the expression "originally included species" prescribed by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 179–180, Decision 69(3)(a)) is to be interpreted as applying only to Rule (g) in Article 30, that is, for the purpose of providing guidance as to what are the nominal species from which alone an author acting under the foregoing Rule may select a type species for a nominal genus established prior to 1st January 1931, for which no type species was designated or indicated by the original author under the earlier Rules in the said Article.

(2) Where an author, when publishing a new generic name, cites by name only one species as belonging to the genus so named, the nominal species so cited is to be accepted as the type species of the genus in question, irrespective of whether the author concerned either (a) cited in the synonymy of that species the name of another, or the names of other, nominal species or (b) associated with the sole nominal species placed by him in the genus the name or names of taxa regarded by him as being the names of subspecies or infra-subspecific forms of that species (type species by monotypy).

Historical Note : The purpose of this *Declaration* is to resolve an apparent inconsistency in the decision of the Paris (1948) Congress referred to. As worded, this decision could be read as applying not only to cases covered by Article 30, Rule (g) of the existing *Règles*, but also to cases covered by Rule (c) of that Article, besides casting doubt on many type-selections that had been thought in good faith to comply with Rule (c) of Article 25 as adopted at the Budapest (1927) Congress.

DECLARATION 27

(*Ops. Decls. int. Comm. zool. Nomencl.* **14** : i–ix, 5th December 1956)

CLARIFICATION OF THE QUESTION OF THE SPECIES TO BE ACCEPTED UNDER RULE (f) IN ARTICLE 30 AS THE TYPE SPECIES OF A NOMINAL GENUS ESTABLISHED AS A SUBSTITUTE FOR A PREVIOUSLY ESTABLISHED SUCH GENUS BUT WITH A DESIGNATED TYPE SPECIES DIFFERENT FROM THAT OF THE NOMINAL GENUS SO REPLACED

DECLARATION :—(1) Where a generic name, when first published, is expressly stated to be a substitute (*e.g.*, by the use of such an expression as "nom. nov." or "nom. mut.") for a previously published generic name but where the author of the substitute name designates as the type species of the genus bearing that name a nominal species other than that which is the type species of the genus the name of which is so replaced, the type species of the genus bearing the substitute name is in all circumstances the nominal species which is the type species of the genus the name of which is so replaced.

Historical Note : This *Declaration*, which is self-explanatory, arose in connection with the generic name *Neanura* MacGillivray, 1893, which was one of a number of names involved in a case centring around the generic name *Achorutes* Templeton, 1835. It covers not only cases where the nominal genus replaced by a substitute nominal genus already possesses a valid type-species (either by original or by subsequent designation), but also cases where the nominal genus so replaced possesses no valid type-species at the time when the replacement name is proposed, but the nominal genus of which the name is proposed as a replacement name is given a type-species which was not one of the originally included species in the replaced nominal genus.

DECLARATION 28

(*Ops. Decls. int. Comm. zool. Nomencl.* **14** : xi–xxiv, 5th December 1956)

CLARIFICATION OF THE STATUS OF A NAME GIVEN TO A FAMILY-GROUP TAXON BASED UPON A MISIDENTIFIED TYPE GENUS

DECLARATION :—(1) Except as is provided in (2) below, an author publishing a new family-group name is to be assumed to have correctly determined the nominal genus selected by him as the type genus of the nominal family-group taxon so established.

(2) Where in the opinion of later authors there is evidence in the original publication that the author of a family-group name treated the type genus of the family-group taxon so named as having as its type species some nominal

species other than that which either already was or later became the type species, the case is to be referred to the International Commission on Zoological Nomenclature for decision.

(3) On receipt of an application submitted under (2) above, it shall be the duty of the International Commission to give a Ruling on the question (a) whether the author of the family-group name in question correctly determined the genus selected by him to be the type genus of the nominal family-group taxon so established or (b) whether he misdetermined that genus and thus in effect established a family-group taxon based upon a different genus bearing an invalid homonymous name.

(4) Where the said Commission gives a Ruling that a given nominal family-group taxon was based upon a misdetermined type genus, the family-group name in question is to be rejected as possessing no rights under either the Law of Priority or the Law of Homonymy.

Historical Note : This *Declaration*, like *Declaration* 27, arose out of the consideration of the problems surrounding the generic name *Achorutes* Templeton, 1835. As first drafted, the *Declaration* would have provided that a family-group name based on a misidentified type-genus should possess no status under the Law of Priority and would thus not invalidate a subsequently published family-group name based upon the name of the same type-genus, but with this type-genus correctly determined. In returning affirmative votes on the draft *Declaration* in the above form, four Commissioners expressed the view that the provisions for dealing with family-group taxa based on misidentified type-genera ought to follow, so far as practicable, those laid down for dealing with genera based on misidentified type-species. In redrafting the *Declaration* accordingly, the Secretary pointed out (a) that, whereas the use of the Plenary Powers was necessary in cases of genera based on misidentified type-species, this was not so in cases of family-group taxa based on misidentified type-genera, since it is objectively ascertainable whether or no the author of a family-group name correctly identified the type-genus in terms of its type-species ; and (b) that whereas generic names based on a misidentified type-species remain available nomenclatorially, a family-group name based on a misidentified type-species should possess no status in nomenclature.

DECLARATION 29

(*Ops. Decls. int. Comm. zool. Nomencl.* **14** : xxv–xxxii, 2nd April 1957)

INTRODUCTION AND DEFINITION OF THE EXPRESSION "LINNEAN TAUTONYMY" IN RELATION TO THE DETERMINATION OF THE TYPE SPECIES OF A NOMINAL GENUS UNDER RULE (d) IN ARTICLE 30

DECLARATION :—Where the type species of a nominal genus is determined under the extension of the provision in Rule (d) (type species by absolute tautonymy) in Article 30 made by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 155), the type species of the genus concerned is to be said to have been determined " by Linnean tautonymy ".

Historical Note : The purpose of this *Declaration* is simply to establish a technical term for the particular type of extension of Article 30 Rule (d) in the existing *Règles* (type-species by absolute tautonymy) to cover the case of nominal genera of which one only of the originally included species had as one of its synonyms a pre-Linnean univerbal specific name consisting of the same word as the generic name. It is for generic names of this type, where there is no apparent tautonymy (the genus *Hippopotamus* Linnaeus, 1758, type-species *amphibius* Linnaeus, 1758 is a case in point), that the type-species is said to be be determined by " Linnean tautonymy " for it is in the works of Linnaeus that this type of case is principally found.

DECLARATION 30

(*Ops. Decls. int. Comm. zool. Nomencl.* **15** : i–xii, 2nd April 1957)

CLARIFICATION OF THE QUESTION OF THE GENERIC NAME IN COMBINATION WITH WHICH A SPECIFIC NAME IS TO BE TREATED AS HAVING BEEN PUBLISHED WHEN THE SPECIES SO NAMED WAS (a) PLACED IN A PREVIOUSLY ESTABLISHED NOMINAL GENUS AND (b) ALSO REFERRED TO A NEW NOMINAL GENUS CONDITIONALLY ESTABLISHED

DECLARATION :—(1) Where an author, in publishing a name for a new nominal species, cites that name in combination with a previously published generic name but at the same time establishes conditionally a new nominal genus for the taxon so named, the specific name in question is to be treated as having been first published in combination with the previously published generic name.

Example : The specific name *gracilis* published by Lowe in 1843 for a new species of fish which was placed by him in the previously established genus *Seriola* but for which also he then established conditionally the new genus *Cubiceps* is to be treated as having been first published in the combination *Seriola gracilis*.

(2) An author who establishes a nominal species in the manner specified in (1) is to be treated (a) as having first published the name for that species in combination with the previously published generic name and (b) as having later transferred the species so named to the nominal genus then conditionally established for it.

Example : In the case cited in (1) above Lowe is to be treated as having first published the binomen *Seriola gracilis* and as having later transferred the species so named to the genus *Cubiceps* then conditionally established, the name for the species thus becoming *Cubiceps gracilis* (Lowe, 1843) (a new combination for the name of the previously established nominal species *Seriola gracilis* Lowe, 1843).

Historical Note : This *Declaration* deals with a particular sort of conditionally published name. The more general aspects of this problem were disposed of in *Declaration* 24.

DECLARATION 31

(*Ops. Decls. int. Comm. zool. Nomencl.* **16** : i–x, 14th June 1957)

CLARIFICATION OF THE EXPRESSION " TYPE GENUS " IN THE PROVISIONS RELATING TO THE PUBLICATION OF FAMILY-GROUP NAMES

DECLARATION :—A name for a family-group taxon is not to be rejected either (a) on the ground that its author did not specify the name of its type genus or (b) on the ground that, when specifying the name of that genus, he treated it as a junior synonym of some other generic name.

Recommandation : Authors publishing names for taxa belonging to the family-group category are recommended :—

(i) to specify by name the genus selected as the type genus of any nominal family-group taxon so established ;

(ii) to select as type genera of such family-group taxa only nominal genera which bear the oldest available names for the generic taxa concerned.

Historical Note : The need for this *Declaration* was felt as a result of the decision of the Copenhagen (1953) Congress (*Copenhagen Decisions* : 33, Decision 45) that family-group names are to be subject to the Law of Priority, at the same time deciding that names of this kind were not to be regarded as unavailable by reason of being defectively formed in one way or another. Doubts as to the precise meaning of these rules were hindering the work of the Commission in giving decisions in particular cases.

DECLARATION 32

(*Ops. Decls. int. Comm. zool. Nomencl.* **16** : xi–xxiv, 14th June 1957)

CLARIFICATION OF THE MEANING OF ARTICLE 21 OF THE "REGLES" IN RELATION TO THE AUTHORSHIP TO BE ATTRIBUTED IN CERTAIN CIRCUMSTANCES TO ZOOLOGICAL NAMES AND TO ANY ACT TAKEN UNDER OTHER PROVISIONS OF THE "REGLES" AFFECTING THE STATUS OF SUCH NAMES

DECLARATION :—(1) Where (a) in connection with the presentation of an unpublished paper before a meeting of a learned society or with the exhibition of a specimen before such a meeting, a name is published with an "indication" in an abstract prepared for use at, or in a report of the proceedings of, such a meeting, and thus acquires the status of availability in zoological nomenclature, the name so published is to be attributed to the author of the unpublished paper or, as the case may be, to the zoologist by whom was proposed the name attached to the specimen exhibited and not to the author of the abstract or report.

(2) Where in any abstract or report similar to those specified in (1) above, there is published the record of any act affecting the status of a previously published name (such as the selection of a type species for a genus or of a lectotype for a species), that act is to be attributed to the author of the unpublished paper concerned or to the person responsible for the exhibition of the labelled specimen in question and not to the author of the abstract or report.

(3) The provisions set out in (1) and (2) above apply equally in a case where a new name or the record of any act affecting the status of a previously published name is published in a semi-popular account of the work of a scientific expedition or the like in advance of the publication of the scientific record of that part of the work of the expedition in question.

Recommandation : Officers of learned societies, editors and others are urged not to include new names or the record of any act affecting the status of a previously published name either (a) in abstracts prepared for, or in the reports of meetings of, learned societies communicated to such meetings or (b) in semi-popular accounts of the work of scientific expeditions or the like in advance of the publication in the first case, of the paper concerned or of the communications so made to the Society and, in the second case, of the scientific record of the relevant part of the work of the expedition in question.

Historical Note : This *Declaration* was originally drawn up in connection with cases concerning two generic names of early date (*Inoceramus* J. Sowerby, 1814 and *Buchia* von Buch, 1845). Situations of the same kind, can however, be found in more recent literature, as in the case of the subspecies *dyala* Riley, 1921 of the species *Zegris eupheme* (Esper, [1805]), but the main usefulness of the *Declaration* will undoubtedly be in establishing current usage, as regards authorship and priority, of older names.

DECLARATION 33

(*Ops. Decls. int. Comm. zool. Nomencl.* **16** : xxv–xxviii, 21st June 1957)

CLARIFICATION OF THE STATUS UNDER ARTICLE 25 OF A NAME FOR A TAXON PUBLISHED IN THE INDEX OF A WORK IN THE TEXT OF WHICH THAT TAXON WAS DESCRIBED ONLY UNDER A VERNACULAR NAME

DECLARATION :—(1) A Latin or Latinised name for a taxon of any rank published in the index to a work by a binominal author who in the body of the work concerned had described and/or figured that taxon without giving it such a name is to be accepted only where there is an unambiguous link between the name in the index and the " indication " provided in the text and/or on a plate, i.e. where the entry in the index contains evidence, by the addition of a footnote or otherwise, that the name was there published as a new name, additional to the evidence provided by the reference there given to a page or plate in the body of the work.

(2) A Latin or Latinised name for a species or genus but not for a taxon of higher rank published in the index of a work by a non-binominal author is to be accepted only (a) where, as in (1) above, there is an unambiguous link between the name in the index and the indication provided in the text and/or on a plate, and (b) where evidence is provided in, or in connection with, the index that, when publishing the name in question, the author applied the principles of binominal nomenclature.

(3) In all cases other than those specified in (1) and (2) above, a name published only in an index is to be rejected, save, where, prior to 4th August 1953, a name so published had already come into common use, in which case that name is not to be rejected without the prior authority of the Commission.

Historical Note : In the paper accompanying the Voting Paper sent out with the draft of this *Declaration*, the Secretary drew attention to the great variation in the manner in which duly formed binominal names have first been published in indexes to wholly or partly non-binominal works. Two examples were cited as extreme cases :—(i) the name *Antirhynchonella* published in the Index to F. A. Quenstedt's *Die Brachiopoden* in 1871, where it was clearly a *nomen nudum* not expressly related to the vernacular term " die Antirhynchonellen " used in the main text ; this name was accordingly suppressed as from this usage in *Opinion* 374 : (ii) the index to Dru Drury's

Illustrations of Natural History, 1770–82, which contains properly formed, Latin or Latinised binominal names, expressly proposed as the scientific names for the forms described or figured in the main part of the work under vernacular names. It was also decided to restrict the provisions of the *Declaration* to generic and specific names, since much disturbance might be caused to established names of higher categories if recognition were given to names cited in the plural in indexes as being given to taxa of suprageneric categories.

DECLARATION 34

(*Ops. Decls. int. Comm. zool. Nomencl.* **17** : i–xii, 3rd September 1957)

CLARIFICATION OF THE PROCEDURE TO BE FOLLOWED BY THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE WHEN AT THE CONCLUSION OF A VOTE ON AN APPLICATION FOR THE USE OF ITS PLENARY POWERS IT IS FOUND THAT A MAJORITY BUT NOT A TWO-THIRDS MAJORITY OF THE MEMBERS OF THE COMMISSION VOTING THEREON HAS VOTED IN FAVOUR OF THE APPLICATION IN QUESTION

DECLARATION :—(1) Where in any vote by the International Commission on Zoological Nomenclature on an application involving the possible use of its Plenary Powers it is found at the close of the Prescribed Voting Period that a majority, but not a two-thirds majority, of the Members of the Commission voting thereon has voted in favour of the use of the foregoing Powers, the vote so taken shall be treated as being a preliminary vote only, and it shall be the duty of the Secretary (a) to report the result of the vote to the Commission as soon as possible, (b) simultaneously therewith to re-submit the proposal for the use of the Plenary Powers to the Commission for final decision, and (c) at the same time to furnish a statement setting out the affirmative action on the name involved in the case which would require to be taken in the event of the rejection of the proposal for the use of the Plenary Powers.

(2) In any case resubmitted to the Commission under (1) above, the procedure to be followed at the close of the Prescribed Voting Period is to be as follows :—

(a) If not less than two out of every three Members of the Commission voting have voted in favour of the use of the Plenary Powers, the proposal in question is to be treated as having been approved and adopted ;

(b) If less than two out of every three Members of the Commission voting have voted in favour of the use of the Plenary Powers, that proposal is to be treated as having been rejected and in its place the proposal involving affirmative action in the opposite sense submitted under (1)(c) above is to be treated as having been approved and adopted.

Historical Note : Up till 1948, the application of the Plenary Powers required a unanimous affirmative vote, but cases in which there was a two-thirds, but not a unanimous, vote in favour of the use of the Plenary Powers were referred to a specially appointed Board of Three, which was empowered to take an effective decision by a simple majority. The Paris (1948) Congress substituted the present two-thirds majority rule for the former practice, but omitted to make any provision for occasions where a majority of the Commissioners voting were in favour of the use of the Plenary Powers in a particular case, but this majority was not a two-thirds majority. In the particular case from which this *Declaration* arose, the Secretary had submitted two alternative motions to the Commission. Alternative "A" required the use of the Plenary Powers and received a simple majority affirmative vote ; Alternative " B " did not require the use of the Plenary Powers and could thus have been adopted as the decision of the Commission by a simple majority, had it not failed to secure such a majority. A position of stalemate was thus reached which could only be broken by the adoption of a *Declaration* on the lines of the one here reported.

DECLARATION 35

(*Ops. Decls. int. Comm. zool. Nomencl.* **17** : xiii–xxvi, 10th October 1957)

CLARIFICATION OF THE MEANING OF THE EXPRESSION "SYNTYPE" AS USED IN THE "REGLES"

DECLARATION :—Where, in publishing a name for a new nominal species established without a designated holotype, an author (a) states that that nominal species is based upon certain specimens before him and/or upon certain descriptions or figures previously published under some other name and (b) elsewhere in the same paper identifies certain other specimens, whether before him or not, or certain other previously published descriptions or figures with the nominal species so described, the specimens, descriptions or figures so identified are not to be regarded as being " of equal nomenclatorial rank " with the specimens, descriptions or figures upon which the author states that that nominal species is based, and specimens, descriptions or figures so identified are not to be regarded as syntypes of the nominal species in question.

Historical Note : This *Declaration* was proposed to cover cases of the kind illustrated by the particular case of the Lepidopteran *Megathymus aryxna* Dyar, 1905. According to the degree of latitude allowed in the interpretation of the term " syntype ", this species is either a subjective junior synonym of *M. neumoegeni* Edwards, 1882 or the oldest available name for the species currently known as *M. evansi* Freeman, 1950. Of the specialists interested in the case, some were of the former opinion, others of the latter. The case turned upon the interpretation to be given to the phrase " of equal nomenclatorial rank" written into the definition of the term "syntype" by the Paris (1948) Congress (*Bull. zool. Nomencl.* **4** : 186). Under the terms of this *Declaration*, the particular case of *Megathymus aryxna* Dyar, 1905, became a subjective junior synonym of *M. neumoegeni* Edwards, 1882.

DECLARATION 36

(*Ops. Decls. int. Comm. zool. Nomencl.* **18** : i–xii, 24th January 1958)

DETERMINATION UNDER DECISION 85 OF THE FOURTEENTH INTERNATIONAL CONGRESS OF ZOOLOGY, COPENHAGEN, 1953, OF THE GENDER TO BE ATTRIBUTED TO GENERIC NAMES HAVING THE TERMINATIONS "-OPS" AND "-OPSIS" RESPECTIVELY

DECLARATION :—In accordance with the provisions of Decision 85 taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953 (1953, *Copenhagen Decisions zool. Nomencl.* : 51), it is hereby directed that the following revised Rule be substituted for the Rule provisionally adopted as Rule (7)(b)(iii) in Decision 84 of the above Congress, the Rule relating to the gender to be attributed to generic names having the terminations "*-ops*" and "*-opsis*" in those cases where the termination in question is obviously derived from the corresponding Greek word :—

Revised Rule

(1) The feminine gender is to be attributed to :—

(a) generic names having the termination "*-opsis*";

(b) generic names having the termination "*-ops*" in cases where it is clear from the context that the "*ops*" portion of the name is derived from the Greek word ὄψ having a short "o" and meaning "a voice";

(c) generic names having the termination "*-ops*" in cases where it is clear from the original description that the "*ops*" portion of the name is derived from the Greek word ὄψ having a short "o" and meaning "a face".

(2) Except in the cases specified in (1)(b) and (1)(c) above, the gender to be attributed to a generic name having the termination "*-ops*" is to be :—

(i) whatever is the gender in general use for that name ; or

(ii) if there is no generally accepted gender, the masculine gender, that being the gender most commonly attributed to the more widely found of the two Greek words concerned, i.e. the word ὤψ having a long " o " and meaning " an eye " or " a face ".

Historical Note : This *Declaration* was prepared in part discharge of the duty placed on the International Commission by Decision 85 of the Copenhagen (1953) Congress (*Copenhagen Decisions* : 51) to review the provisional rules laid down in Decision 84 of that Congress for the determination of the gender of generic names. The case of names ending in " *-ops* " was found to be more complicated than had been supposed by the Copenhagen Congress, and the *Declaration* here reported was drawn up as the result of consultations with the Commission's Consulting Classical Adviser.

DECLARATION 37

(*Ops. Decls. int. Comm. zool. Nomencl.* **18** : xiii–xxii, 24th January 1958)

CLARIFICATION OF THE PROVISIONS IN THE " REGLES " REGARDING THE METHOD TO BE FOLLOWED IN DETERMINING THE RELATIVE PRECEDENCE TO BE ACCORDED TO ANY TWO NAMES FOR NOMINAL FAMILY-GROUP TAXA PUBLISHED IN THE SAME WORK AND ON THE SAME DATE

DECLARATION :—(1) The relative precedence to be accorded to any two names for nominal family-group taxa published in the same work and on the same date is to be determined in accordance with the " First Reviser " Principle, that is, when two such taxa are united on taxonomic grounds, the name to be used for the combined taxon so recognised is to be whichever of the previously published family-group names is selected for use as such by a " First Reviser " (" selection by a ' First Reviser ' ").

(2) For the purposes of (1) above, the expression " selection by a ' First Reviser ' " is to be rigidly construed and such a selection is to be deemed to have been effected only when an author, after citing two or more family-group names published in the same work and on the same date, clearly indicates, by whatever method, (a) that he is of the opinion that the respective type genera of the nominal family-group taxa concerned are referable to a single family-group taxon, and (b) that he is selecting one of the family-group names concerned, to the exclusion of the other name or names, to be the name for the combined family-group taxon so recognised.

Historical Note : Article 28 of the existing *Régles* laid it down that the relative precedence to be accorded to generic and specific names published in the same book and on the same day was to be determined in accordance with the " First Reviser " principle. The Paris (1948) Congress substituted the " Page and Line Precedence " precedence for the " First Reviser " principle, on account of the feeling of many taxonomists that the action that an author is required to take to qualify as a " First Reviser " could not be, or had not been, sufficiently clearly defined. The Copenhagen (1953) Congress restored the " First Reviser " principle, at the same time providing a definition of the action so required. This *Declaration* extends the same principle to cover cases of the same kind at the family-group level.

DECLARATION 38

(*Ops. Decls. int. Comm. zool. Nomencl.* **18** : xxiii–xxx, 11th April, 1958)

CLARIFICATION OF THE PROCEDURE TO BE ADOPTED FOR DETERMINING THE AUTHORSHIP TO BE ATTRIBUTED FOR THE PURPOSES OF ZOOLOGICAL NOMENCLATURE TO ANY GIVEN WORK IN CASES WHERE THE ACCURACY OF THE AUTHORSHIP STATED IN THE TITLE HAS BEEN QUESTIONED

DECLARATION :—Where a work bears a statement purporting to specify or indicate the name of the author or the names of the authors, that statement is to be deemed to be correct, unless and until evidence is published purporting to show that that statement is incorrect, in which case the issue so raised is to be referred to the International Commission for decision.

Historical Note : This *Declaration* was proposed in order to cover the sort of case of which the *Prodrom einer Monographie der böhmischen Trilobiten*, by Hawle and Corda, 1847, provides an example. In his accompanying note, the Secretary suggested that this type of case should be treated in a similar way to the problem, discussed by the Paris (1948) Congress, of works of which the stated date of publication is challenged as being incorrect (*Bull. zool. Nomencl.* **4** : 223–4), except that where the true date of publication could often be ascertained objectively, this would rarely be the case in questions of disputed authorship. Reference of disputed cases to the Commission is therefore a necessity in cases of this kind.

DECLARATION 39

(*Ops. Decls. int. Comm. zool. Nomencl.* **19** : i–xviii, 30th May, 1958)

REVIEW UNDER COPENHAGEN DECISION 85 OF THE RULES RELATING TO THE GENDER TO BE ATTRIBUTED TO CERTAIN CLASSES OF GENERIC NAMES PRESCRIBED IN THE PROVISIONAL RULES NUMBERED AS RULE (7)(b)(i) AND RULE (7)(c)(i) RESPECTIVELY IN DECISION 84 OF THE FOURTEENTH INTERNATIONAL CONGRESS OF ZOOLOGY, COPENHAGEN, 1953

DECLARATION :—In accordance with the provisions of Decision 85 taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953

(1953, *Copenhagen Decisions zool. Nomencl.* : 51) it is hereby directed as follows :—

(1) The provisional Rules numbered respectively as Rule (7)(b)(i) and Rule (7)(c)(i) in Decision 84 of the foregoing Congress are hereby deleted.

(2) The provisional Rule bearing the number (7)(a) (containing examples of generic names to which the masculine gender is to be attributed) is hereby divided into two portions and the revised number (7)(a)(i) is hereby allotted to the Rule recorded as Rule (7)(a) in the Copenhagen Decision referred to above.

(3) The following new Rule giving further examples of generic names to which the masculine gender is to be attributed is hereby inserted as Rule (7)(a)(ii) :—

(ii) any name consisting of a compound word, the final part of which is a Greek noun fully Latinised with a suffix of the masculine gender, notwithstanding the fact that, prior to Latinisation, the final part of the compound word in question was a Greek word of some other gender.

Example :
" *-cheilus* " (and " *-chilus* ") ; " *-gnathus* " ; " *-rhamphus* " ; " *-rhynchus* " and " *-stathus* ".

(4) The following new Rule giving examples of generic names to which the feminine gender is to be attributed is hereby inserted as Rule (7)(b)(i) in place of the Rule bearing that number deleted under (1) above :—

(i) any name consisting of a compound word, the final part of which is a Greek noun fully Latinised with a suffix of the feminine gender, notwithstanding the fact that, prior to Latinisation, the final part of the word in question was a Greek word of some other gender. *Example* : " *-cera* " ; " *-metopa* ".

(5) The Rule which at present bears the Number (7)(c)(ii) (relating to the attribution of the neuter gender to " *-soma* " and similar names) is in future to be known as Rule (7)(c).

Historical Note : This *Declaration* forms the second part (the first part having already been reported above as *Declaration* 36) of the review, called for by Decision 85 of the Copenhagen (1953) Congress (*Copenhagen Decisions* : 51) of the rules for the determination of the gender of generic names laid down in Decision 84 of that Congress. It had at first been hoped that this review could have been presented as one comprehensive document, but the urgent need to clarify certain questions relating to the gender of generic names on the *Official List of Generic Names in Zoology*, if the instalment of that List was to be published in book form before the present Congress, led to the decision being taken to ask the Consulting Classical Adviser to the International Commission to submit interim reports on the problems of special urgency dealt with in *Declarations* 36 and 39.

DECLARATION 40

(*Ops. Decls. int. Comm. zool. Nomencl.*, in the press)

DECLARATION :—Generic names having the terminations " *-ides* ", " *-ites* ", and " *-oides* " are to be treated as being masculine in gender.

Historical Note : This *Declaration* was adopted in order to unify divergent practices among zoologists in regard to the gender attributed to generic names having the terminations indicated above. It was formerly the practice of some zoologists to regard all such names as masculine, but others thought that the gender of the noun with which any of these endings was combined should determine the gender of the whole. The ruling given in the *Declaration* is in conformity with advice received from the Commission's Consulting Classical Adviser.

The proposal for the adoption of this *Declaration* was published in *Bull. zool. Nomencl.* **13** : 203–5. The *Declaration* has not yet been published, but the Commission has voted for its adoption by a large majority.

DECLARATION 41

(*Ops. Decls. int. Comm. zool. Nomencl.*, in the press)

DECLARATION :—Where in any work written in the Latin language :—

(1) a noun (or a word treated as a noun) is employed as a generic name, it is to be accepted as having been validly published as such, provided that it was published in the nominative singular ;

(2) a noun or adjective is associated binominally with a word accepted under (1) above as having been employed as a generic name, the noun or adjective concerned is to be accepted as having been validly published as a specific name ;

(3) a noun or adjective is associated trinominally (either directly or by being linked to a binomen by an expression such as " ssp.", " var.", etc.) with a word accepted under (2) above as having been employed as a specific name, the noun or adjective concerned is to be treated as having been published as a subspecific name.

Historical Note : It is obvious that, in works written in Latin, or in which the descriptions of taxa are written in Latin, there may at times be difficulty in deciding whether particular words are to be read as zoological names or as part of the general text of the passage in question. The issue is clarified by this *Declaration*.

This *Declaration* has not yet been published, but the Commission has voted for its adoption by a large majority, subject to a drafting amendment designed to show that names of the kind dealt with are to be accepted only if they comply with the other requirements of the *Règles* as regard availability.

III. THE RELATIONSHIP OF " DECLARATIONS " 18–41 TO THE EXISTING " REGLES " TO THE REVISED DRAFT OF THE " REGLES "

Tables I and II, appended immediately below, show the relationship of *Declarations* 18–41 to the existing *Règles* and to the draft English text of the revised *Règles*. In Table I, the first column lists the *Declarations* in numerical order. The second and third columns show which Article in the existing *Règles*, or which decision of the subsequent (Paris and Copenhagen) Congresses is affected. The fourth column shows at what point each *Declaration* has been incorporated by Professor Bradley into his draft English text of the revised *Règles*. Table II shows in the first column the Article in the existing *Règles* and in the second column the Paris and Copenhagen decisions, affected. The third column shows the incorporation into the draft English text of the revised *Règles* and the fourth column the *Declaration* Number.

The following abbreviations are used in these Tables. A capital B followed by the figure 4, a colon and figures indicates a reference to the proceedings of the Paris (1948) Congress (*Bull. zool. Nomencl.* **4**), page-numbers. A capital C followed by a colon, numbers, oblique stroke and numbers indicates a reference to the Report of the Copenhagen (1953) Congress (*Copenhagen Decisions*), page and paragraph (Decision) number. References to the draft English text of the revised *Règles* are in the form Article number, oblique stroke, Section number (paragraph) (subparagraph).

TABLE I

" Declaration " Number	Reference to Existing " Régles " Article No. etc. or	Subsequent Congress Decision	Reference to draft English text of revised " Régles " Article No. etc.
18	New Schedule (Family-group Names)	C : 37, Decision 58	omitted
19	New Schedule (Specific Names)	B 4 : 270–2, 334, 627–8	omitted
20	New Article (Family-group Names)		omitted
21	30, Rule (g)		19/2(d)
22	30, Rule (a)		19/3(a)(ii)
23	35		24/12(a)
24	25		6/5(c)
25	30, Rule (g)		19/5(i)(ii)
26	30, Rule (g)		19/3(b)
27	30, Rule (f)		19/4(b) and 8 (f)
28	New Article (Family-group Names, homonymy in)		24/6(d)
29	30, Rule (d)		omitted
30	New Article (Specific Names)		15/8(b)
31	New Article (Family-group Names)		omitted
32	21		7/3 and 22/1(b)
33	25		6/8(c)
34	New Article (Plenary Powers)	B 4 : 55–6	*Declarations* 34–41 were published after Professor Bradley's draft English text had been sent to the Printer
35	New Article (syntypes)	B 4 : 186	
36	New Schedule (Gender Rules)	C : 51, Decision 84–5	
37	New Article (Family-group Names)		
38	New Article (authorship)	C : 51, Decision 84–5	
39	New Schedule (Gender Rules)		
40	New Schedule (Gender Rules)		
41	25(c)		

TABLE II

Reference to Existing “ Régles ” Article No. etc.	or Subsequent Congress Decision	Reference to Draft English Text of revised “ Régles ” Article No. etc.	“ Declaration ” No.
21		7/3 and 22/1(b)	32
25		6/5(c)	24
25		6/8(c)	33
30, Rule (a)		19/3(a)(ii)	22
30, Rule (d)		omitted	29
30, Rule (f)		19/4(b) and 8 (f)	27
30, Rule (g)		19/2(d)	21
30, Rule (g)		19/5(i), (ii)	25
30, Rule (g)		19/3(b)	26
35		24/12(a)	23
New Article (Family-group Names)		omitted	20
New Article (Family-group Names)		omitted	31
New Article (Family-group Names)		omitted	37[1]
New Article (Family-group Names, homonymy in)		24/6(d)	28
New Article (Specific Names)		15/8(b)	30
New Article (syntypes)	B 4 : 186	omitted	35[1]
New Article (authorship)		omitted	38[1]
New Article (Plenary Powers)	B 4 : 55–6	omitted	34[1]
New Schedule (Gender Rules)	C : 51/84–5	omitted	36[1]
New Schedule (Gender Rules)	C : 51/84–5	omitted	39[1]
New Schedule (Family-group Names)	C : 37/58	omitted	18
New Schedule (Specific Names)	B 4 : 270–2, 334, 627–8	omitted	19

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[1] *Declarations* 34–41 were published after Professor Bradley's draft English Text had been sent to the Printer.

IV. THE ASSIMILATION OF " DECLARATIONS " 18-41 INTO THE REVISED DRAFT OF THE " REGLES "

Examination of Tables I and II above will show that certain of the *Declarations* with which this Report is concerned have been incorporated at the points shown in Professor Bradley's draft English text of the revised *Règles*. These are *Declarations* 21–28, 30, 32 and 33, and it is not proposed to discuss them further in this Section. Of the remaining *Declarations*, those numbered 18–20, 29 and 31 had been published before the draft of the revised *Règles* had been sent to the printer and those numbered 34–41 were published after that date. The question of the assimilation of these *Declarations* into the *Règles* is discussed in the two following Subsections of this Section, in order of *Declaration* numbers.

(a) " Declarations " published before the printing of the revised draft of the " Règles "

Declaration 18 : This *Declaration* is concerned with the manner in which entries in the *Official List of Family-group Names in Zoology* and in the *Officiel Index of Rejected and Invalid Family-group Names in Zoology* are to be made. The instructions so given, while mandatory in scope, are addressed to the International Commission rather than to zoologists generally, and concern the procedure of the Commission. As such, they clearly relate to Draft Article 29 and to Section 9, paragraph (e) of that Article. In this paragraph, which is concerned with the maintenance of the *Official Lists* and *Official Indexes*, Item (iii) deals with the list and index for family-group names. *Declaration* 18 should therefore be appended to the revised *Règles* as a Schedule to Article 29/9(e)(iii).

Declaration 19 : This *Declaration* is of a similar kind to the preceding in that it is in the nature of a procedural instruction to the Commission. It relates to the manner in which entries are to made in the *Official List of Specific Names in Zoology* and in the corresponding *Official Index*. It should therefore be appended as a Schedule to Article 29/9(e)(x).

Declaration 20 : This *Declaration* clarifies the status of a family-group name based upon the name of a genus that has been suppressed under the Plenary Powers. Section 4 of Draft Article 13 deals with the question of changes in the names of type-genera of family-group taxa and it is recommended that *Declaration* 20 be incorporated as a new paragraph (c) in this Section, the paragraphs now numbered (c) and (d) becoming paragraphs (d) and (e).

Declaration 29 : This *Declaration* introduces the term " Linnean tautonymy " to describe the determination of the type-species of a genus by reference to a pre-Linnean tautonymous univerbal specific name having been cited in the synonymy of one of the included species. The substance of the *Declaration* is to be found in Draft Article 19/3(d)(ii) and it is only necessary to add the phrase in quotation marks and parentheses (" type by Linnean tautonymy ") at the end of the subparagraph.

Declaration 31 : This *Declaration* clarifies the expression " type-genus " in relation to family group names. Draft Article 18B deals with the application of the type-principle to names of the family-group, and it is suggested that *Declaration* 31 be incorporated into Article 18B as a new Section to be numbered 6.

(b) " Declarations " published after the revised draft of the " Règles " had been sent to the printer

Declaration 34 : This *Declaration* provides a mechanism whereby a condition of stalemate that could (and in a particular instance did in fact) arise in taking votes from the Commission on matters requiring the application of the Plenary Powers can be broken. It should be incorporated into the Article defining the powers of the Commission, namely as a new subparagraph (iv) in Article 29/6(c). The subparagraphs now numbered (iv) to (vi) will then be numbered (v) to (vii).

Declaration 35 : This *Declaration* clarifies the meaning of the word " syntype " as used in the *Règles*. The proper place for its incorporation into the revised *Règles* is clearly as an additional paragraph (iv) of Article 20A, Section 2.

Declaration 36 : This *Declaration* deals with a part of the problem of providing rules for the determination of the gender of generic names. Its incorporation into Article 28, Section 11 of the revised *Règles* has been proposed by Professor Bradley in a proposal placed on the Agenda Paper for the London Colloquium on Zoological Nomenclature in *Bull. zool. Nomencl.* **15** : 731–735.

Declaration 37 : This *Declaration* restores the " First Reviser " principle in determining the relative precedence among family-group names published in the same work and on the same date. The proper place for its incorporation in the revised *Règles* is as a new paragraph (d) of Section 3 of Article 13.

Declaration 38 : This *Declaration* provides that questions relating to the disputed authorship of works are to be referred to the Commission for decision. As such it should be incorporated into the revised *Règles* as a new Section 5 of Article 7.

Declaration 39 : This *Declaration* continues the provision of rules for the determination of the gender of generic names begun in *Declaration* 36. As in the case of that *Declaration,* so should this be appended as a Schedule to Section 11 of Article 28 of the revised *Règles.*

Declaration 40 : This *Declaration* provides that generic names ending in *-ides, -ites* and *-oides* are to be treated as masculine in gender. It should therefore be incorporated into the revised *Règles* as a Schedule to Section 11 of Article 28.

Declaration 41 : This *Declaration* clarifies the interpretation of names published in works written in Latin from the point of view of their availability. It is proposed that it be incorporated into the revised *Règles* as a new paragraph (f) of Section 1 of Article 6.

V. RECOMMENDATIONS

The following recommendations are submitted for the consideration of the International Commission, namely, that it should :—

(1) formally report to the Fifteenth International Congress of Zoology, London, 1958, the adoption since the close of the preceding Congress of the twenty-four *Declarations* numbered 18 to 41, and recommend that approval be given to the Rulings so given ;

(2) recommend the incorporation in the revised text of the *Règles* of the provisions specified in the Appendix to the present Report for the purpose of giving effect to the Rulings given in the above *Declarations,* in so far as this has not already been done in the Draft Text published in Volume 14 of the *Bulletin of Zoological Nomenclature.*

APPENDIX

Proposals for the incorporation in the " Régles " of the Rulings given in " Declarations " 18 to 41 (being " Declarations " rendered since the close of the Copenhagen Congress), in so far as the required provisions have not been included in the draft text of the " Régles " published in volume 14 of the " Bulletin of Zoological Nomenclature "

Point 1

Draft Article 6/1 : *Declaration* 41 clarifies the problem of recognition, for the purposes of the Law of Availability, of names published in works written in Latin. It is therefore proposed that it be incorporated into the revised

Règles as a new paragraph (f) of Article 6, Section 1. The paragraphs now numbered (f) to (n) would then be numbered (g) to (o).

Point 2

Draft Article 7, Section 5 : *Declaration* 38 provides that questions of the disputed authorship of works are to be submitted to the Commission for decision and is analogous in some respects to the existing provisions (draft Article 7/2(c)) relating to the solution of questions of works of disputed or uncertain date. It is suggestion that *Declaration* 38 be incorporated as a new Section 5 of Article 7.

Point 3

Draft Article 13, Section 4 : *Declaration* 20 deals with the status of a family-group name based upon the name of a genus that has been suppressed under the Plenary Powers. Draft Article 13/4 deals with questions of changes in family-group names, and it is proposed that *Declaration* 20 be incorporated as a new paragraph (c) in this Section.

Point 4

Draft Article 13, Section 3 : *Declaration* 37 deals with the question of the relative precedence among family-group names published in the same work on the same date and restores the " First Reviser " principle for these cases. It is proposed that it be incorporated as a new paragraph (d) of the Section named.

Point 5

Draft Article 18B : *Declaration* 31 clarifies the expression " type-genus " in relation to family-group names. It is proposed that it be incorporated as a new Section 6 in Article 18B.

Point 6

Draft Article 19/3(d)(ii) : This section deals with the determination of the type-species of a genus by reference to a pre-Linnean univerbal specific name that is tautonymous with the generic name. *Declaration* 29 introduces and defines the term " Linnean tautonymy " for cases of this kind. It is proposed that this *Declaration* be incorporated in the *Règles* by the addition of the phrase (" type by Linnean tautonymy ") at the end of the subparagraph indicated.

Point 7

Draft Article 20A/2 : *Declaration* 35 clarifies the meaning of the word " syntype " as used in the *Règles*. It is proposed that it be incorporated as an additional paragraph (iv) of draft Article 20A, Section 2.

Point 8

Draft Article 28, Section 11 : The Copenhagen Congress (*Copenhagen Decisions* : 51, Decision 85) instructs the Commission to review the rules for the determination of the gender of generic names laid down in Decision 84 of that Congress. *Declarations* 36 and 39 consist of parts of this review. The first deals with names ending in *-ops* and *-opsis* and the second with names ending in *-cheilus* (and *-chilus*), *-gnathus*, *-rhamphus*, *-rhynchus* and *-stathus*. It is proposed that these two *Declarations* be incorporated in the form of Schedules to Section 11 of draft Article 28.

Point 9

Draft Article 28, Section 11 : Although *Declaration* 40 forms no part of the review, under Copenhagen Decision 85, of the gender rules provisionally adopted under Copenhagen Decision 84 (since the terminations *-ides*, *-ites* and *-oides*, dealt with in the *Declaration*, are not mentioned in *Decision* 84), nevertheless it must clearly be assimilated into the revised *Règles* at the same point, namely, as a Schedule related to Section 11 of Article 28.

Point 10

Draft Article 29/6(c) : *Declaration* 34 provides a mechanism for breaking a stalemate that can (and in one actual case did) arise in taking votes from the Commission in cases requiring the application of the Plenary Powers. It is proposed that it be incorporated as a new subparagraph (iv) in draft Article 29/6(c). If this proposal is adopted, the subparagraphs now numbered (iv) to (vi) would be numbered (v) to (vii).

Point 11

Draft Article 29/9(e)(v) : *Declaration* 19 prescribes the manner in which entries are to be made in the *Official List* and *Official Index of Specific Names in Zoology*. It is proposed that it be incorporated in the form of a Schedule to the subparagraph and item given.

Point 12

Draft Article 29/9(e)(iii) : *Declaration* 18 prescribes the manner in which entries are to be made in the *Official List* and *Official Index of Family-Group Names in Zoology.* It is proposed that it be incorporated in the form of a schedule to the subparagraph and item given.

CASE No. 69

EXISTING " REGLES " : ACTION RECOMMENDED TO BE TAKEN BY THE LONDON (1958) CONGRESS FOR THE PURPOSE OF CONSOLIDATING IN THE REVISED " REGLES " THE PROVISIONS APPEARING IN SECTION " G " OF THE "APPENDICE " TO THE EXISTING " REGLES "

(Commission Reference : Z.N.(S.) 1357)

DOCUMENT 69/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

Up to the time of the Paris Congress, Section G of the *Appendice* to the *Règles* laid down rules, considered to be mandatory, for the transliteration[1] into Latin characters of names formed from geographical names in languages with no alphabet or with some alphabet other than the Latin alphabet. The Paris Congress, having first relegated these rules to the status of *Recommandations* (*Bull. zool. Nomencl.* **4** : 73), went on to exclude from the Section names formed from geographical names in the Greek and Cyrillic alphabets, names of the former origin to be dealt with in Section F of the *Appendice*, and those of the latter origin in a new schedule (see Case No. 67). The same Congress also declared that Item 16 of Section G, which stated, *inter alia*, that the Arabic *aïn* could be represented by the soft aspirate, should be amended in this respect ; for Professor Boschma had shown (*Bull. zool. Nomencl.* **3** : 109) that the Arabic *aïn* corresponded in fact to the *spiritus asper* or *esprit rude*, and this correction was accepted.

2. The Copenhagen (1953) Congress made no recommendations concerning Section G of the *Appendice*, but since that time the subject has been discussed, in letters to the Commission, by Professor J. Chester Bradley and Professor

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[1] A proposal to use the term " Latinisation " in place of " transliteration " submitted by Professor L. W. Grensted is reproduced as Document 38/1 on p. 753 of this volume.

L. W. Grensted. First, Professor Bradley (2nd January 1958) informed the Secretary that he had not considered the treatment of the *Appendice* to be part of the re-drafting and codifying task laid upon him by the Copenhagen Congress. The Secretary thereupon invited Professor Grensted, as Classical Adviser to the Commission, to prepare papers on Sections F and G. Professor Grensted's report on Section F is reproduced as Document 67/1 on p. 1110 above. His comments relating to Section G were sent to the Secretary in an enclosure with a letter of 26th March 1958. Secondly, Professor Bradley submitted a paper of suggested alterations on 23rd March 1958, but as this paper was marked " not for publication " it would not be proper to present it here for the consideration of the Colloquium.

3. It therefore only remains to present the comments that are available for publication (namely, those submitted by Professor Grensted) in the form of amendments to the existing text. Professor Boschma's emendation of Item 16 is included for completeness, but since this has already been adopted by Congress resolution, no affirmative vote is called for in this case.

4. It has already been proposed that Sections A to E of the *Appendice* should be distributed among the various Articles of the revised *Règles* to which they relate (see Document 55/1, p. 1017 above) and that Section F should be consolidated into the revised *Règles* as a Schedule to Section 11 of Article 28. It is now proposed that Section G should also be consolidated into the revised *Règles* as a Schedule to Section 11 of Article 28, with the following alterations :—

(i) Second introductory paragraph, first line, for " paragraphs " read " rules "

(ii) Rule 2, for *ü* read *ue* (following recent discussions of diacritic marks)

(iii) Rule 5, delete the words following the semicolon. Alter the remainder to read "An interrupted vowel sound is represented by an apostrophe "

(iv) Rule 9 should read " *Kh* represents the harsh guttural and *gh* the soft guttural of Arabic "

(v) Rule 10, delete the last phrase in parentheses. (The fact stated is untrue ; there is no soft " th " sound in Greek and ζ is represented by " z ")

(vi) Rule 16, for " soft aspirate " read " *spiritus asper* ".

5. The revised Section G of the *Appendice* (now proposed to be incorporated into the revised *Règles* as a Schedule), therefore reads as shown in the attached Annexe.

ANNEXE

Revised Draft of Section G of the "Appendice"

Latinisation of Geographical and Proper Names : The geographical names of nations which employ the Latin characters are to be written with the orthography of the country in which they originate.

The following rules apply only to the geographic names of countries which have no true alphabet or which use letters that are different from the Latin alphabet.

Names of places, however, which have been established by long usage preserve their usual orthography. Examples : Algiers, Moscow.

(1) The vowels *a*, *e*, *i* and *o* are pronounced as in French, Italian, Spanish or German. The letter *e* is never mute.

(2) The French sound *u* is represented by *ue*, as in German.

(3) The French sound *ou* is represented by *u*, as in Italian, Spanish, German, etc.

(4) The French sound *eu* is represented by *oe*, pronounced as in the French word *oeil*.

(5) The long sound of a vowel is indicated by a circumflex accent ; an interrupted vowel sound is represented by an apostrophe.

(6) The consonants *b*, *d*, *f*, *j*, *k*, *l*, *m*, *n*, *p*, *q*, *r*, *t*, *v* and *z* are pronounced as in French.

(7) The letters *g* and *s* always have the hard sound, as in the French words *gamelle* and *sirop*.

(8) The sound represented in French by *ch* is designated by *sh*. Examples : *Shérif*, *Kashgar*.

(9) *Kh* represents the harsh guttural and *gh* the soft guttural of Arabic.

(10) *Th* represents the sound which terminates the English word path (θ in Greek). *Dh* represents the sound which commences the English word those.

(11) Aside from such employment (9, 10) of the letter *h* modifying the letter which preceeds it, *h* is always aspirated ; the apostrophe is therefore never used before a word commencing with *h*.

(12) The semivowel represented by *y* is pronounced as in *yole*.

(13) The semivowel *w* is pronounced as in the English word *William*.

(14) The double sounds *dj*, *tch*, *ts*, etc., are indicated by letters representing the sounds which compose them. Example : *Matshim*.

(15) The ñ is pronounced *gn*, as in *seigneur*.

(16) The letters *x*, *c* and *q* are not used, since they are duplicates of other letters representing the same sounds ; but *q* may serve to indicate the Arabic *qaf* and the *spiritus asper* may be used to represent the Arabic *aïn*.

An attempt should be made to indicate as exactly as possible, by means of the letters given above, the local pronunciation without trying to give a complete representation of all the sounds which are heard.

CASE No. 70

DRAFT "REGLES", ARTICLE 28, SECTION 10: GENERAL PROVISIONS RELATING TO THE FORMATION OF GENERIC NAMES

(Commission Reference: Z.N.(S.) 1368)

DOCUMENT 70/1

Proposed re-casting of Section 10 of Article 28 of the Draft of the revised English text of the "Règles"

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 15th May 1958)

When early in 1956 the International Commission came to vote upon an application regarding the name *Hemiprocne* Nitzsch, 1829, (a name published for a genus of bird) submitted by Dr. John T. Zimmer (*The American Museum of Natural History, New York*) two members of the Commission (J. Chester Bradley; P. C. Sylvester-Bradley) drew attention to an inconsistency between Decisions 78 and 79 of the Copenhagen Congress (1953, *Copenhagen Decisions zool. Nomencl.* : 47–48). The case in which the foregoing situation came to light was later embodied in *Opinion* 457 (1957, *Ops. Decls. int. Comm. zool. Nomencl.* **15** : 419–432). In that *Opinion* the point raised by the Commissioners referred to above was set out for purposes of record in a Minute executed by myself as Secretary on 13th March 1956, the text of which was reproduced in paragraph 8 of that *Opinion*.

2. In order to simplify the presentation of the issue here involved the Minute referred to above is annexed to the present paper as Appendix 1. Reference to this Minute will show (i) that in Section (1)(a)(i) of the formula set out in Decision 78 the Copenhagen Congress reaffirmed the Ruling previously given by the Commission in its *Opinion* 457 that it was an essential condition that in order to acquire the status of availability, a generic name . . . should have been "published in the nominative singular", this requirement being there incorporated in the mandatory provisions of Article 8 (as the Article relating to the formation of generic names then was) and (ii) that in Decision 79 contraventions of the "mandatory" provisions of Article 8 were to be subject to automatic correction. It will be immediately apparent that, so far as concerns the provision that a generic name must be a noun in the nominative singular the application of "automatic correction" under Decision 79 would completely nullify the provision in Decision 78 that publication in the nominative singular is an essential prerequisite to the acquisition by a generic name of the status of availability.

3. On the occasion discussed above the foregoing subject was duly noted as one which would require to be brought before the Colloquium on Zoological Nomenclature and the International Congress of Zoology to be held in London in July 1958. The appearance of the text of the Revised Draft of the *Règles*, where the Copenhagen Decisions 78 and 79 are dealt with in Section 10 of Article 28 (1957, *Bull. zool. Nomencl.* **14** : 205–206) created a new situation which called for a fresh review of the question of the procedure to be adopted for remedying the inconsistency between Copenhagen Decisions 78 and 79. The reason for this is that, as compiler of the draft of the revised text of the *Règles*, Professor Chester Bradley has omitted the greater part of Copenhagen Decision 78 on the ground that (as he explains in his compiler's notes), there is, in his view, no need as regards most of the provisions concerned to be included (as decided upon at Copenhagen) in the Article relating to the formation of generic names [i.e. the equivalent of Article 8 of the existing *Règles*]. In accordance with this view Professor Bradley has spread out among other Articles most of the components of the Article here in question as that Article was envisaged at Copenhagen. It is necessary to examine what is left of Copenhagen Decision 78 in the new provision (Article 28, Section 10) as a preliminary to considering whether the provisions transferred from Copenhagen Decision 78 to the new Article are in any way inconsistent (as was Decision 78 itself) with the provisions of Copenhagen Decision 79.

4. In the Draft of the Revised text of the *Règles* Copenhagen Decision 78 is reproduced in the following truncated form :—

Existing Draft of Section 10 *of Article* 28

Section 10 :—A generic or subgeneric name must be a noun in the nominative singular, or be so treated.

5. It is necessary for the present purposes to draw attention to an undesirable ambiguity introduced into this provision through a departure from the terms of the relevant decision by the Paris Congress (1950, *Bull. zool. Nomencl.* **4** : 139—140). The point missed by the present over-simplified version is that, in order to acquire the status of availability, a generic name must consist of a noun " published " in the nominative singular. The point is of importance for in the case of many nouns it is not possible if the word is cited in some case other than the nominative to be sure what is the correct form for the nominative singular. It was for this reason that the Commission in its *Opinion* 183 and later the Paris Congress of 1948 expressly stipulated that a generic name must have been published in the nominative singular before it could be treated as being acceptable nomenclatorially. In this connection it appears to me that the meaning of the subordinate phrase " or be so treated " [i.e. be treated as a word in the nominative singular] is rendered obscure by the unfortunate decision on the part of the compiler to omit the example originally suggested by Professor H. Boschma which appears in the Copenhagen Decision 78—namely the generic name *Potamon*. That name, though a Latin-alphabetised version of a Greek noun in the genitive plural (meaning " of the rivers ") is nonetheless acceptable as a generic name by reason of its having been treated by its original author as though it were a noun in the nominative singular.

6. Another portion of Decision 78 which for some reason does not find a place in Section 10 of Article 28 as at present drafted is the requirement in Article 8 of the existing *Règles* that a generic name must be written with a " capital initial letter ", though this provision is referred to with approval in lines 37 to 39 in the " Discussion " relating to this part of the Draft which appears on page 207 of Volume 14 of the *Bulletin*. This provision should certainly be included in the revised text of the *Règles* and Section 10 of Article 28 of Professor Bradley's Draft seems to be the most suitable place in which to insert it. The publication of a generic name with a small initial letter has not in the past been treated by the Commission as invalidating that name, the view having been taken that this was a minor error which should be regarded as subject to automatic correction by subsequent authors. In the provision now to be inserted this matter should, I recommend, be provided for accordingly.

7. Before passing to consider the principal issue involved in this case, I should like to refer to one minor point of drafting which arises in connection with the draft of Section 10 of Article 28. This is the addition by the compiler of the words " or subgenus " after the word " genus ". I suggest that these words should be omitted. First, they are, I think, unnecessary, having regard to the provision elsewhere in the *Règles* (in Article 7 of the existing *Règles* and in Article 14, Section 1(a) in the Draft now before the Congress (*Bull. zool. Nomencl.* **14** : 100)) that generic and subgeneric names are co-ordinate in status. Second, it would appear illogical to include an express reference to subgeneric names at this point without doing so at every other point in the text of the *Règles* where any reference is made to a generic name.

8. We must now turn to examine the circumstances in which Decisions 78 and 79 of the Copenhagen Congress came to be drafted in an inconsistent manner. Those zoologists who took part in the Copenhagen discussions will recall that a number of speakers at the Colloquium urged that as few as possible of the provisions already agreed upon in relation to the formation and orthography of generic names should be mandatory in character, as many as possible being reduced from mandatory rank to the status of *Recommandations.* In the time then available it was not possible for the Colloquium and Congress to re-examine the whole of the numerous provisions then included in, or associated with, Article 8 for the purpose of determining which should continue to be of mandatory force and which should be reduced in status in the manner described above. It was accordingly decided that this task should be delegated to myself as the Chairman of the Colloquium. The formula so prepared is that which was later embodied in Decision 78. At this point I have to express regret for having—as draftsman—been responsible for the discrepancy now found to exist between Decisions 78 and 79. I should explain that, as the result of having examined the various provisions associated with (the old) Article 8, I came to the conclusion that of the particular, as contrasted with the general, provisions concerned the only one which should retain its mandatory status was that relating to names based on modern patronymics, the first portion of which consists of certain specified particles (Copenhagen Decision 80) and all the remainder should be reduced to the status of *Recommandations.* It was in the light of this conclusion that Section (1)(b) and Section (2) of the formula set out in Decision 78 were drafted. It was with the same considerations in mind that, as had been agreed in the Colloquium I prepared the draft of Decision 79 regarding the automatic correction by later workers of any infringement of provision (1)(b) in Decision 78 referred to above. At this point I thought that it would be convenient to include also in Decision 78 particulars of the other portions of the existing Article 8 which need to be retained Hence it was that Section (1)(a) was included in the draft. Unfortunately, in preparing that draft I failed to insert words making it clear that, although the " automatic correction " procedure was to apply to infringements of Section (1)(b), they were not to apply to infringements of Section (1)(a). In order to clear up this matter which, as is clear from the " Discussion " printed on pages 206 and 207 of Volume 14 of the *Bulletin of Zoological Nomenclature*, has proved a source of difficulty to Professor Chester Bradley as compiler of the draft of the Revised Text of the *Règles*, it is necessary that, so far as the provisions as to corrections are concerned, Sub-Sections (a) and (b) in Section (1) in Decision 78 should be separated from one another. Breaches of Sub-Section (b) should remain subject to automatic correction. Section (a) should be re-drafted so as to make it clear which are the portions, breaches of which are to be subject to correction by later workers and which are not to be so subject, breaches of the provisions in question being regarded as so serious as to invalidate the name in question.

9. If we leave on one side for separate consideration (if such is desired) the question whether the compiler was well-advised in departing so radically from the form of the decision by the Copenhagen Congress recorded as Decision 78, I recommend that, in order to meet the points noted in the present paper :—

> the drafts of Section 10 (*Bull.* **14** : 205, lines 20–22) of Article 28 of the Draft *Règles* and Sub-Section (a) of that Section (*ibid.* **14** : 206, lines 1–4) be replaced by the suggested revised provision set out in Appendix 2 to the present paper.

APPENDIX 1

Minute by the Secretary dated 13th March 1956 and included in " Opinion " 457 in paragraph 8 (1957, Ops. Decls. int. Comm. zool. Nomencl. 15 : 429–430)

An apparent inconsistency between Decisions 78 and 79 taken by the Fourteenth International Congress of Zoology, Copenhagen 1953, in regard to the formation of generic names

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

Two members of the International Commission (Professor J. Chester Bradley ; Mr. P. C. Sylvester-Bradley) have drawn my attention, with reference to Mr. John T. Zimmer's application regarding the generic name *Hemiprocne* as published by Nitzsch in 1829 in the nominative plural as *Hemiprocnes*, to an apparent inconsistency between Decisions 78 and 79 taken by the Fourteenth International Congress of Zoology, Copenhagen, 1953 (1953, *Copenhagen Decisions zool. Nomencl.* : 47–48) which will require to be considered by the Fifteenth International Congress of Zoology when it meets in London in 1958. In the first of these decisions the Copenhagen Congress reaffirmed without discussion a decision taken by the Thirteenth Congress in Paris in 1948 that the Ruling given in *Opinion* 183 that, in order to acquire availability, a generic name must first be published in the nominative singular should be incorporated in the *Règles* (1950, *Bull. zool. Nomencl.* **4** : 139–140). Under the decision so taken the foregoing provision adopted by the Paris Congress was included both by that Congress and by the Copenhagen Congress among the mandatory provisions of Article 8. Under the second of the decisions referred to above (Decision 79) the Copenhagen Congress inserted in the *Règles* a provision under which any breaches of the mandatory provisions in Article 8 became subject to automatic correction. So far as concerns the mandatory provision embodying the Ruling originally given in *Opinion* 183, Decision 79 prescribing automatic correction is incapable of application in many cases, for, as is obvious, it is impossible in many cases to determine what is the correct form for the nominative singular of a Latin noun if the only evidence available is a version of that word in some other case or number. The fact that Decision 79 was so drafted as to bring within its scope the portion of Decision 78 dealing with the foregoing matter was due solely to inadvertence.

2. The case raised by Dr. Zimmer illustrates very clearly the impossibility in certain cases of applying Copenhagen Decision 79 to the provision discussed above, for more inspection of the nominative plural *Hemiprocnes* published by Nitzsch in 1829 would not be sufficient to establish beyond question that the nominative singular intended by Nitzsch was *Hemiprocne*, even though it might establish a high degree of probability that this was Nitzsch's intention.

3. Fortunately, the inconsistency in the record of the Copenhagen Decisions discussed in paragraph 1 above does not affect the particular case under consideration, for in his application Dr. Zimmer asked that the object which he sought should be attained by the use by the Commission of its Plenary Powers. In the present case therefore the question discussed above is of academic interest only.

APPENDIX 2

Draft " Règles ", Article 28, Section 10 and 10(a) : suggested revised text for

Section 10. Grammatical nature :—A generic name must be a noun or a word treated as such by its original author, and, in order to acquire the status of availability, must be published in the nominative singular or, if it is not a word of classical origin as though it were a word cited in that case and number.

Examples :—

Productus : Although an adjective, this word is available as a generic name because it was treated by its original author as though it were a noun.

Potamon : Although a Latinised version of a Greek word in the genitive plural, this word is available as a generic name because it was treated by its original author as though it were a word cited in the nominative singular.

(a) **Citation :** A generic name must be written with a capital initial letter, and a name not so published is to be corrected by subsequent authors but should continue to be attributed to its original author and date.

CASE No. 71

DRAFT " REGLES ", ARTICLE 24, SECTION 12 : DIFFERENCES IN SPELLING TO BE IGNORED FOR THE PURPOSES OF THE LAW OF HOMONYMY

(Commission Reference : Z.N.(S.) 1369)

DOCUMENT 71/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

The problem of differences of spelling among specific names that are to be ignored for the purposes of the Law of Homonymy has long caused difficulty, partly because it is only possible to illustrate the principle by examples, and no list of such examples is ever quite complete. Hence zoologists, especially if they have no knowledge of the classical languages, may at any time be faced with the problem of whether two specific names that are found in the same genus, either primarily or secondarily, and, being of the same meaning and origin, differ in spelling by only a single letter, are to be regarded as homonyms or not.

2. The problem as regards names of this kind where the difference arises from the Latinization of geographical names that originate in languages with no alphabet or in one with some other than the Latin alphabet, is dealt with in *Declaration* 23 (see Document 68/1, p. 1121 above). The majority of cases that are not of this sort probably arise from different spellings of Latin words themselves, as in Examples 5 and 6 given in Draft Article 24, Section 12 (*Bull. zool. Nomencl.* **14** : 181)—" *autumnalis* and *auctumnalis* " and " *litoralis, littoralis* ". Other similar cases have been mentioned in correspondence addressed by zoologists to the Commission, such as *quatuor, quattuor* and *litera, littera.*

3. In so far as this question is concerned with Latin words, it was obviously proper to seek the advice of the Commission's Consulting Classical Adviser. Professor Grensted gave several further examples of the kind under discussion, and pointed out that spelling was not uniform even in classical Latin, let alone the Latin of mediaeval and recent times. He proposed a clause to cover all cases of this general sort, and the following proposal is based on his draft, with grateful acknowledgment.

4. It is proposed that Examples 5 and 6 given in Section 12 of Article 24 in Professor J. Chester Bradley's draft be deleted and that the examples now numbered 7 to 12 be now numbered 5 to 10 ; that the resulting Examples 1 to 10 be grouped as paragraph (i) of the Section referred to ; and that a new paragraph (ii) be added as follows :—

(ii) Where two spellings of a single Latin word have come into current use in zoological nomenclature, whether the two spellings are of classical, mediaeval or recent origin, generic names, or specific names within a single genus, having either of these spellings are to be regarded as homonyms. Any zoologist who believes he has detected a case of homonymy of this sort should refer the matter to the Commission for decision.

Examples : *autumnalis*, *auctumnalis* ; *anul-us* (*-aris*), *annul-us* (*-aris*) ; *decem-*, *decim-* ; *liter-a* (*-atus*), *litter-a* (*-atus*) ; *litoralis*, *littoralis* ; *mamill-a* (*-aris*, *-atus*), *mammill-a* (*-aris*, *-atus*) ; *quatuor*, *quattuor*.

5. If this proposal is adopted, then the position with regard to names that may or may not be homonyms in terms of the proposal will be analogous with names originating from geographical names dealt with in *Declaration* 40. Since doubtful cases of this latter kind that are met with in the future are to be submitted to the Commission for decision, the same course should clearly be adopted with doubtful cases of the kind considered in the present paper. This will entail a slight emendation of the clause covering the Commission's duties in this respect (draft Article 29, Section 7 (aa)), and the following is proposed :—

(aa) **Similar generic and specific names.**—It shall be the duty of the Commission to decide whether two generic names, or two specific names in the same genus, derived from the same geographical name in a language without an alphabet, or in a language with some other than the Latin alphabet, or from variant spellings of the same Latin word are to be treated as homonyms.

CASE No. 72

DRAFT " REGLES ", ARTICLE 28, SECTION 4(a) : THE DIAERESIS SYMBOL

(Commission Reference : Z.N.(S.) 1013)

DOCUMENT 72/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

In the draft English text of the revised *Règles*, Article 28, Section 4, paragraph (a), the diaeresis symbol is excluded from the category of diacritic marks. The Copenhagen Congress decided (1953, *Copenhagen Decisions* : 79, Decision 155) that diacritic marks were to be replaced by the equivalent letters according to a schedule to be prepared, but clearly the diaeresis symbol cannot be treated in this way, since its function is not to represent a suppressed letter, but to show that two adjacent vowels are to be pronounced separately.

2. In a paper published in 1957 (*Bull. zool. Nomencl.* **13** : 292–293), the Secretary discussed the question of the diaeresis in zoological names in a draft *Declaration* as follows :—

> In the case of a zoological name which either consists of, or is compounded with, a word in which, prior to its use for taxonomic purposes, two adjacent vowels were separated into two syllables by a diaeresis, this division is to be indicated by the use of the symbol [¨] placed over the vowel which constitutes the second syllable.
>
> *Example* : The vowels of the name " Chloe " are to be divided into two syllables by a diaeresis. Accordingly, when this word is used as a zoological name, it should be written as *Chloë* and not as *Chloe.*

3. The publication of this paper elicited comments from three sources. Two of these comments (by Professor Charles H. Blake and Mr. C. F. dos Passos) favoured the retention of the diaeresis symbol ; the third (from Mr. C. W.

Sabrosky, on behalf of Dr. P. W. Oman, Dr. C. F. W. Muesebeck and Dr. Alan Stone as well as himself) recommended its discontinuance. These comments are reproduced as Annexes 1, 2 and 3 to this paper. Owing to the limited interval of time between the publication of this paper and the date of the London Congress, it has been decided to remit the question to the Colloquium instead of proceeding with the proposed *Declaration*.

4. The correspondence on which the Commission's file on this subject was first opened, however, dealt with a name of a kind that was not covered by the draft *Declaration*, since the name in question neither consists of nor is compounded with a word in which, prior to its use for taxonomic purposes, two adjacent vowels were separated by a diaeresis. The name in question was the specific name first published by J. Sowerby in 1812 in the combination *Terebratula tetraëdra* and applied to a species of Brachiopod which is one of the commonest fossils of the Marlstone Rock-bed in the British Middle Lias (Jurassic). This species was later transferred to the genus *Rhynchonella* and in 1918 was made type-species by original designation of the genus *Tetrarhynchia* by S. S. Buckman. The question of the correct orthography of this name was brought to the attention of the Office of the Commission by Dr. D. V. Ager who was then preparing the text of the first part of his "Monograph of the British Liassic Rhynchonellidae" for publication by the Palaeontographical Society, of which I was at that time the editor, in 1956.

5. The specific name in this case is compounded from the Greek words τέτρα and ἕδρον, which should be correctly Latinized as "tetra" and "hedron". Sowerby was thus guilty of an error of Latinization when he first published the name in the form *tetraëdra*, for he introduced a diaeresis where none had existed before and he altered the ending of the second component. Article 11, Section 1(a) of the draft English text of the revised *Règles* (referring to *Copenhagen Decisions* 43 : Decision 71(1)(a)(i)), rules that errors of Latinization [transliteration] are not to be regarded as "inadvertent errors" and are thus not to be corrected. Sowerby's name must thus retain its diaeresis symbol in virtue of the terms of this article, but must discard it in virtue of the terms of Mr. Hemming's draft *Declaration*.

6. Thomas Davidson, the pre-eminent nineteenth century authority on British Brachiopods, seems to have been the first to introduce the spelling *tetrahedra*, although he sometimes used this spelling and sometimes the original spelling in his "Monograph of the British Fossil Brachiopoda" (Palaeontographical Society, 1851–1886) (information kindly supplied by Dr. H. M. Muir-Wood). R. Tate (1876, *in* Tate and Blake, *The Yorkshire Lias*) used *tetrahedra*, but Buckman in 1918 spelt the name *tetraedra*. There is, however, no doubt that the name is most familiar to British palaeontologists, field geologists and students, to all of whom the species in question is an important one, in the spelling *tetrahedra*. It was this consideration of usage among both the "pure" and the "applied" users of the name that was uppermost in my mind when, as editor of Dr. Ager's monograph, I requested him to use the spelling *tetrahedra* and to explain his action in the following passage (Ager, 1956, *op. cit.*, pp. 7–8) :—

> J. Sowerby originally named this species *Terebratula tetraëdra*. The specific name has commonly been transliterated since the later part of the last century as *tetrahedra*. Under Article 20 of the International Code of Zoological Nomenclature (Schenk and McMasters 1948) this was not valid since " the exact original spelling including diacritic marks is to be retained ". At the Zoological Congress at Copenhagen in 1953 the suspension of this Article was proposed in paragraph 101 of the *Recommandations* (Hemming, 1953 : 57) and this was subsequently approved by the Congress. It was recommended that the respelling of words following the dropping of diacritic marks was to conform with a schedule not yet published. It is not clear whether the diaeresis is to be regarded as a diacritic mark or not but for the present it is proposed to adhere to the spelling *tetrahedra* not only because this is the form in which the word is most familiar but also on the grounds that Sowerby was guilty of a manifest error when he transliterated the word from Greek to English. The Greek words are τετρα and ἕδρα and should have been written " tetra ". and " hedra ". The diaeresis in this case separates two vowels each belonging to different parts of a compound word and ought to be considered in a different way from such cases as " alcinoë ", " chloë " etc., where this is not so. The question of the diaeresis will be raised at the next meeting of the International Congress in 1958 and a definite ruling on this matter may then be expected.

7. The sort of case represented by the present instance can be dealt with in one of two ways. Either every case of the irregular or anomalous use of the diaeresis symbol can be submitted to the Commission for a ruling in an *Opinion*, or the draft *Declaration* can be amended by the addition of words to cover the general issue. The latter course, however, is not easy for me to recommend at present, for I know of no other case of the false intrusion of a diaeresis than that here discussed. If a satisfactory form of words could be devised, their adoption would help to bring all cases of the same sort into the domain of " automatic nomenclature ", so that this course is so much the more to be favoured if it can be made feasible. The addition of the following words to the draft *Declaration* is therefore suggested (as a basis for discussion) at the end of the first sentence and before the *Example* :—

> Names in which a diaeresis symbol has been introduced as a result of an error in Latinization of a Greek word or of a compound word in which both components are of Greek origin are to be automatically corrected by the substitution of the correctly Latinized form of the syllables concerned.

8. It is proposed that the draft of the proposed *Declaration*, as amended by the addition of the above sentence, be incorporated in the draft *Règles* as a new Section 4 of Article 28. The Sections now numbered 4 to 18 would then be numbered 5 to 19.

ANNEXE 1

(Extract from letter from CHARLES H. BLAKE dated 12th October 1957)

In connection with the proposal to make a *Declaration* relative to the use of the diaeresis, I present the following considerations. So far as the ordinary languages of western Europe are concerned, the diaeresis has only one function namely to indicate that two successive vowels are pronounced separately rather than as a diphthong. Since scientific names are, by definition, either of Latin origin or Latinised words of other languages, it would seem that the diaeresis can only be used in places where the Romans themselves would have used it. For example, it is necessary in *aëdon*. On the other hand it is not necessary in *Picoides*. This is in spite of the fact that the diaeresis was originally published on the second *i* because it was used to show that the diphthong was pronounced as in Greek and not as in French. I cannot at the moment call to mind any case in which the same spelling with and without a diaeresis has different meanings but would not be surprised if such cases occur.

It should be noted further that the Germans do not appear to use the diaeresis, presumably on the theory that a German always knows how to pronounce a German word and ignores the problem of pronouncing words from other languages.

It should be noted also that it is more or less customary to ignore the proper form of the diaeresis [¨], German Umlaut ["] and the double acute accent in Hungarian [″].

It is evident that I favor, then, the retention of the diaeresis in its proper places with the proviso that it not be confused with other diacritical marks.

ANNEXE 2

(Extract from letter from CYRIL F. DOS PASSOS dated 16th December 1957)

I have read the draft of a suggested provision contained in your paper entitled " Proposed adoption of a *Declaration* clarifying the question whether in the case of a zoological name in which two adjacent vowels constitute separate syllables a symbol signifying the diaeresis should under Article 20 of the *Règles* be placed over the second of the vowels concerned ", and am in complete accord therewith.

ANNEXE 3

(Extract from letter from CURTIS W. SABROSKY dated 22nd November 1957)

The problem has been discussed with my colleagues P. W. Oman, C. F. W. Muesebeck and Alan Stone. This letter reflects the view of all four of us.

We doubt that any serious confusion would arise from dispensing altogether with the use of the diaeresis symbol. The modern trend is toward simplification, and many words which once carried the diaeresis (zoölogy, coöperate, etc.) are now customarily printed without it. We suspect that many scientific names have also lost their original diaeresis symbol, without causing any difficulty. For example, in the dipterous family LARVAEVORIDAE (Tachinidae), *Roëselia* and *Thelaïra* were both proposed with the diaeresis symbol by Robineau-Desvoidy (1830) but are now regularly used without it. The first appears now only in synonymies, but *Thelaira* is a common well-known name. It appears without the diaeresis symbol in such standard works as Neave's *Nomenclator Zoologicus*, Aldrich's *Catalogue of North American Diptera* (1905), Bezzi and Stein in vol. 3 of the *Katalog der Palaërktischen Dipteren* (1907), Stein's " Die verbreitetsten Tachiniden " (1924), Townsend's *Manual of Myiology* (1936, 1939), Kloet and Kincks' *Check List of British Insects* (1945), and van Emden on Tachinidae in the *Handbooks for the Identification of British Insects* (1954). The dropping of the diaeresis symbol has caused no difficulty or confusion whatsoever. We note that in some cases the diaeresis symbol has been added (e.g. *Aedes* and *Meloe*, which were proposed thus, were emended to Aëdes and Meloë), but it was recognised long ago that no good was served and the symbols were dropped.

Like the decision to avoid the use of diacritic marks, dropping the diaeresis symbol would be another step in the direction of simplifying names. The less complicated the names, the fewer errors there will be when they are printed in other countries and in other type faces.

Accordingly, we oppose the suggested provision which would require the diaeresis, and suggest instead that a section be added to the new Code to provide that the diaeresis symbol shall not be used.

CASE No. 73

DRAFT " REGLES " : THE QUESTION OF THE STATUS OF THE " GLOSSARY "

(Commission Reference : Z.N.(S.) 1370)

DOCUMENT 73/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

In the draft English text of the revised *Règles* Professor J. Chester Bradley has relegated all definitions of technical terms and " terms of art ", together with definitions of many words used in their ordinary sense, to a " Glossary ". No provision for such a " Glossary " is to be found in any of the existing *Règles* or in any of the Congress decisions which have had as their object the definition of the form and structure of the revised *Règles*. On the contrary, the various formal definitions that were formulated by the Paris (1948) and Copenhagen (1953) Congresses were directed to be incorporated into the substantive text of the *Règles*. In excluding them from the legislative part of the text, Professor Bradley has thus presented the Colloquium with a serious problem, for consideration will have to be given to the question whether these existing official definitions are to be replaced in their authorised positions in the legislative text, or whether a new Article, forming an integral part of the *Règles* (after the pattern of the " defining clause " incorporated in British Acts of Parliament) is to be created for their reception.

2. The question outlined in the preceding paragraph is not, however, the only one to which the Colloquium will have to find an answer, since, apart from giving in his " Glossary " definitions of terms which previous Congresses had decided should be defined (and often in words other than those authorised by those Congresses), Professor Bradley has added definitions of other terms for which no prior authorisation existed. Some of the definitions so introduced for the first time are clearly necessary and useful, as, for example, those in which the various taxonomic categories other than those for which the Paris Congress provided definitions, are defined. Others relate to technical terms, such as " *nomen conservandum* " and " *nomen conservatum* ", which have no authorised usage in the *Règles* and which seem to introduce an undesirable element of jargon. Yet a third group of definitions applies to words used

either exactly in the sense in which they are defined in any standard dictionary, or in a sense so little different that all zoologists will immediately comprehend their meaning. Thus, if the Colloquium follows the instructions of previous Cogresses relating to the incorporation of the existing official definitions in the *Règles*, there will remain an unplaced residue of Professor Bradley's new introductions. Some of the definitions so introduced will no doubt find their proper places in the *Règles* without difficulty, but this will not be the case with those of the second and third kinds mentioned above. If, on the other hand, the Colloquium decides to recommend the creation of a new Article to contain the " Glossary ", then the content of that " Glossary " will have to be decided. There seems little reason why it should contain definitions of some, but by no means all, of the words used in the *Règles* with their ordinary meanings as given in standard dictionaries.

3. Study of Professor Bradley's draft reveals that, in fact, a number of necessary definitions have been embodied in the legislative text, and it is not always clear what principle has determined whether a given definition was included in the text or relegated to the " Glossary ". This, coupled with the fact that the other required definitions will be more likely to be noticed and understood if they are placed in direct relation to the relevant parts of the *Règles*, is a strong argument in favour of dispensing with a " Glossary " as such. On the other hand, a defining Article would be of great utility, especially to those in the early stages of their acquaintance with nomenclature, since it would facilitate an understanding of the terms employed and would make it unnecessary to search for the definitions of these terms in the legislative text.

4. The following instances point out some of the anomalies created by the unregulated position of the " Glossary " as it stands in the draft :—

(i) The definition of the term " Family-group " provided by the Copenhagen Congress is the only definition of a taxonomic category not placed in the " Glossary " ; it has been placed in draft Article 13, Section 1(a).

(ii) Article XXI of the existing *Règles* defining the term " author ", has been deleted from the code and placed in the " Glossary ".

(iii) The definition of the term " date of publication " which, according to a decision of the Paris Congress (*Bull. zool. Nomencl.* **4** : 223, Conclusion 18(a)), was to have been placed " in or near " Article XXV of the existing *Règles*, has been removed from the code and placed in the " Glossary ".

(iv) The phrase " nominal taxon " is fundamental to zoological nomenclature, but its meaning is often not understood by zoologists. A definition of it might be expected in the " Glossary " (and in my view should certainly be included in a defining article if such an article is to be included in the revised *Règles*), together with a definitition of " taxonomic taxon ". The *Foreword* to draft Article 18 contains words which could form the basis of such definitions.

(v) The Paris Congress (*Bull. zool. Nomencl.* **4** : 118, Conclusion 1(2)) provided definitions of the terms " homonym ", " primary homonym " and " secondary homonym " to be included in Articles replacing Articles XXXV and XXXVI of the existing *Règles*. These definitions have been excluded from the draft *Règles* and placed in the " Glossary ".

5. It is therefore proposed that provision be made for the addition of a defining Article to the *Règles*. It is suggested that the best position for this Article would be after draft Article 29 (which prescribes the organisation, functions, powers, duties and procedure of the Commission) and before Article 30 (the terms of which affect the whole of the rest of the *Règles*, and thus affect the definitions, whether these are distributed throughout the legislative text or segregated in a special Article). If this proposal is found acceptable, the " Glossary " would bear the Article-number 30 and the Article now numbered 30 would become Article 31. It is further proposed that the defining Article should define only those terms used in a technical sense or as " terms of art " in the legislative text, and that all other terms and definitions be excluded.

6. The appended Table gives in its four columns, (i) the expressions listed in Professor Bradley's " Glossary " ; (ii) reference to any previous official definitions, together with the wording of each definition as officially approved by the relevant Congress, where Professor Bradley's wording differs ; (iii) a sign to indicate those definitions introduced for the first time by Professor Bradley ; and (iv) remarks on sundry items. An asterisk is prefixed to each term in the first column which ought to be included in the proposed defining Article.

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
anonymous		X	Defined in standard dictionaries
*author	I.R.XXI. That person who first publishes the name in connection with an indication, a definition or a description, unless it is clear from the contents of the publication that some other person is responsible for the said name and its indication, definition or description		Removed from *Règles* to Glossary and reworded
barbarous		X	Defined in standard dictionaries
*binomen	C : 20 par. 16. The binominal combination which constitutes the scientific name of a species		Rewords in terms of B.4 : 127, 3 (2, b) defining " specific name "
binominal		X	Defined in standard dictionaries. Reference to B.4 : 127, 3 (2, b) is obscure. No definition is given anywhere of *" binominal nomenclature ", defined in B.5 : 153 as the system, introduced by Linnaeus in the 10th edition of the *Systema Naturae*, 1758, of giving every species a name consisting of two words, the first being a noun sub-

		stantive in the nominative singular (the generic name) and the second either (i) a noun in the nominative singular in apposition to the generic name, (ii) a noun in the genitive singular, or (iii) an adjective agreeing in gender, number and case with the generic name (the specific name)
bracket	X	Defined in standard dictionaries
category	X	Defined in standard dictionaries
*class	X	
classical	X	Defined in standard dictionaries
Commission	X	This is not a definition. See draft Article 29/1 for a provisional definition
conservation	X	Defined in standard dictionaries
*Principle of C.	X	
continuity	X	Defined in standard dictionaries
Law of C.	X	As defined is equivalent to Principle of Conservation. If the two terms are used with the same meaning, one of them should be dispensed with

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*co-ordinate	C : 33 par. 46 (for family-group). For purposes of priority, a name published for a unit in any category in the family-group and based on a particular type-genus shall date from its original publication for a unit in any category in the family-group and shall retain that priority even if that unit is subsequently treated as belonging to a higher or lower category in the family-group		Rewords and provides an exception for categories " especially excepted or in their nature inapplicable " which is difficult to understand
cotype		X	Since authors have been advised not to use this term (**B.4 : 191** ; see draft Article 20/Rec. 6), a definition should not be given in the code or any related document
*date	**B.4 : 223**		Repeats with addition of " reckoned according to the Gregorian calendar " and omitting " whole "
diacritic mark		X	Defined in standard dictionaries
document		X	Defined in standard dictionaries
*emendation	C : **44** par. 71(2)(a)		Repeats

*establish		X	
*family		X	
*genus		X	
group		X	No definition of so ordinary a word is called for in this context. " Family-group " is defined in draft Article 13/1 and proposals are published in *Bull.* **15.** " Collective groups " are defined in draft Article 14/2
*holotype	B.4 : 186		Repeats, adding " if any "
*homonym	B.4 : 118. Where the same name is applied to two different units belonging to the same taxonomic category, for example, to two different genera or two different species, each of the names so used is a " homonym " of the other		Rewords. The Paris definition exactly meets present-day needs if the words " for example, to two different genera or two different species " are deleted and the proposals made in *Bull.* **15** regarding homonymy between names at different taxonomic levels are approved.
junior homonym		X	No definition required
*primary homonym	B.4 : 100. Pairs of binomina consisting of combinations of a generic name and a specific name identical at the time of their original publication (with Copenhagen terminology R.V.M.)		New and less satisfactory wording, except that it includes reference to subspecific names

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*secondary homonym	B.**4** : 100. All homonyms other than primary homonyms, namely pairs of identical specific names which were not originally published in combination with the same generic name but subsequently came to be used in combination with the same generic name through the transfer of one or both of the species concerned to another genus or through the union of two or more genera		New and less satisfactory wording, except that it includes reference to subspecific names
senior homonym		X	No definition required
homonymy		X	Defined in standard dictionaries
*Law of H.		X	
*indication	B.**4** : 80, 149, 255, 345. C : 35, par. 52		Some rewording. The items are arranged in this order for the first time
*infrasubspecific		X	
*i. form	B.**4** : 90. Any form of a species other than a subspecies (e.g., seasonal forms and minority elements of all kinds within a species, such as sexual forms, transitional forms, aberrations, etc.)		Rewords, and excludes aberrations

*parallel i. forms		X	
*Latinise		X	Defined in standard dictionaries
*lectotype	B.4 : 186. A single specimen selected, subsequent to the publication of the original description, from a series of syntypes to be "the type", such selection, in order to be effective to be a selection made known through being announced in a publication		Rewords, omitting the condition about publication
ligature		X	Defined in standard dictionaries
locality		X	No definition of so ordinary a word is called for in this context
*designated typical 1	C : 27, par. 31(2)		Rewords the Copenhagen Decision and refers to an unofficial record of the proceedings
*restricted typical 1	C : 26, par. 31(1)		Rewords the Copenhagen Decision and refers to an unofficial record of the proceedings
*type-1			These terms are defined in an identical way, and one of them should be dispensed with—preferably "typical locality"
typical 1			

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
monotype		X	Defined in standard dictionaries
*monotypic name		X X	The English word is " monotypical " No definition of so ordinary a word is called for in this context
*available n.	I.R. XXV(c) and various Paris and Copenhagen decisions, especially B.4 : 336		Refers to draft Article 6. See " valid name " below
*infra-subspecific n.	B.4 : 89–90	X	The Paris decision defined an infra-subspecific form, but not an i. name
*specific n.	B.4 : 128		Repeats. The Paris Congress defined a " specific trivial name "
*subspecific n.	B4. : 128–9		Repeats. The Paris Congress defined a " subspecific trivial name "
trivial n.			It is not true that this term is a synonym of " vernacular name ", but since it is no longer to be used in its " Paris " sense, no definition is called for here

*valid n.			Draft Article 6/1, Explanation, states that draft Article 8 alone determines which of a number of available names is the valid name. The important Paris ruling that the word " available " was to be reserved for nomenclatorial considerations and the word " valid " for taxonomic matters has been overlooked. If any of conditions 1, 3 or 4 laid down in draft Article 8, Section 1 are not satisfied, the name is not an available name to start with
*vernacular n.		X	
*neotype	C : 28, par. 33		Repeats
new		X	No definition required in this context
nomen		X	Defined in standard Latin dictionaries
nomen conservandum nomen conservatum		X	These terms are superfluous jargon

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*nomen dubium	B.4 : 76. . . . where specialists are agreed that the available evidence is insufficient to permit of the identification of the taxonomic species represented by the nominal species in question, the name of that nominal species is not to be treated as a *nomen dubium* and therefore not available for use for taxonomic purposes		Omits phrase calling for agreement among specialists
nominal		X	Defined in standard dictionaries
*nominate	B.4 : 191. C : 21, par. 18 denotes . . . the subgenus which contains the type species of the genus to which the subgenus is referred, and . . . the subspecies of a polytypic species which is based upon the same type specimen as the nominal species to which it is referred		The first part of this definition is found in standard dictionaries. The second sentence, which apparently applies to all taxa, might have serious repercussions in the Order/Class-group. The words " (if any) " at the end destroy the force of the whole passage
noun		X	No definition required in this context
*Order		X	
parenthesis		X	Defined in standard dictionaries

*Phylum	X	
Plenary Powers	X	Objection to the term " suspend " in this context has already been put forward in *Bull.* **15**
preoccupy	X	No definition required in this context
*priority	X	This definition is perhaps too American for incorporation into the substantive text of the code. The following is proposed as an alternative : " Under the Principle of Priority in zoological nomenclature, the first available name for any taxon takes precedence over any or all later names for the same taxon. Names that contravene the principle may be established under the Principle of Conservation [or Law of Continuity] after reference to the Commission. As stated in the Preamble, the Principle of Priority does not prohibit changes in names due to changes in taxonomic opinion "
publisher	X	Defined in standard dictionaries
*quadrinominal	X	
root	X	Defined in standard dictionaries

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*separatum		X	
*species		X	
spelling automatic correction of s.	C : 45, par. 72(2). An Invalid Original Spelling is to be corrected and to be treated as corrected wherever it occurs, the corrected spelling (i.e., the Valid Emendation) replacing the Invalid Original Spelling in all respects, including authorship and date		The Copenhagen Decision does not use the term " automatic correction of s.", but it can only mean the act of replacing an Invalid Original Spelling by a Valid Emendation, and as such scarcely needs separate definition
*original spelling	C : 43, par. 71(1). The spelling (or spellings if there were more than one) used for a generic name or for a specific name on the occasion of its original publication		The definition given covers all nominal taxa by implication, but there is no authority for defining the spellings of Order/Class-group names. The Copenhagen Decision needs the addition of " for a family or subfamily name or " after " used "
*invalid o.s.	C : 44, par. 71(2)(b). (i) Where there is clear evidence in the original publication that an Original Spelling was based upon an inadvertent error (e.g., where an author states that he is proposing a name to honour Carolus Linnaeus but the name is printed *ninnaei*) the erroneous spelling is an Invalid Original Spelling. (ii) Where an Original Spelling is a spelling which		The definitions given in the Copenhagen Decision have been so shortened as to become obscure

	contravenes any of the mandatory provisions of [draft Article 28] that spelling is an Invalid Original Spelling. (iii) Where there was more than one Original Spelling and one of those spellings has, by virtue of being that employed by the First Subsequent User, become the Valid Original Spelling, each of the remaining Original Spellings is an Invalid Original Spelling
*valid o.s.	C : 43, par. 71(1)(a). (i) Where there was only one Original Spelling, that is the Valid Original Spelling, provided that there is no clear evidence in the original publication that this spelling was based on an inadvertent error, such as a *lapsus* [*calami*] or a copyist's or printer's error and that the name does not contravene any of the mandatory provisions of [draft Article 28]. For this purpose, the expression " inadvertent error " does not include an error of [Latinization] or the use of an inappropriate connective vowel in the formation of a name based upon a compound word. (ii) Where there was more than one Original Spelling and in the case of none of these spellings was there clear evidence that it was the result of an inadvertent error, the Valid Original Spelling is that one of the Original Spellings used by the First Subsequent User of the name

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*subsequent s.	C : 44, par. 71(2). Any spelling of a name in a publication subsequent to that in which the name first appeared is a Subsequent Spelling		
*erroneous s.s.	C : 44, par. 71(2)(b). Any change in the spelling of a previously published name other than an Emendation is an Erroneous Subsequent Spelling		
status		X	No definition required in this context
stem	B.4 : 246. The expression " stem " is to be interpreted as meaning either (1) the grammatical or classical stem, or (2) a part of the stem, the choice to be made in favour of whichever of the foregoing methods both shows most clearly the relationship between the generic name on the one hand and the name of the family on the other and provides the simpler and more euphonious form compatible with that relationship		The definition given is that found in standard dictionaries. The Paris definition will clearly be more helpful to zoologists

*subclass		X	
*subfamily		X	
*subgenus		X	
*Sub-Order		X	
*Sub-Phylum		X	
*subspecies	B.4 : 89. A population (e.g. geographical, ecological) within a species which differs from any other such population within the same species		Slightly reworded
*Super-Class		X	
*superfamily		X	
*Super-Order		X	
suffix		X	Defined in standard dictionaries
*syntype	B.4 : 186. One of a number of specimens of equal nomenclatorial rank which formed all or part of the material before the original author, in those cases where that author did not designate or indicate a holotype		The addition of the words " of a nominal species " after " material " fills in what was understood in the Paris definition. The last phrase has been Americanised and does not bear quite the same meaning as the original

Expression	Previous definition (existing " Règles " or later Congress decision)	First defined in draft English text	Remarks
*taxon	C : 20, par. 15		
*nominal t.		X	
*nominate t.		X	This term is here made to apply to all categories, but there is no authority for saying that a nominate taxon of the Order/Class-group " bears the name (sometimes with changed suffix) " of the next higher taxon
*taxonomic t		X	
*taxonomist		X	
*tribe		X	
*trinomen	B.4 : 128(4)(2). C.20, par. 16		It is assumed that " trinomen " replaces " subspecific name " as that term was defined at Paris

trinominal	X	Defined in standard dictionaries
*qualified t.	X	
*type	X	
word	X	All these terms are defined in standard dictionaries and definitions are not called for in the present context
compound w.		
derivative w.		
simple w.		
syntactic compound w.		
work	X	Defined in standard dictionaries

CASE No. 74

DRAFT " REGLES ", ARTICLE 5, SECTION 1 : QUESTION OF THE APTNESS OF THE PRINCIPLE OF " STARE DECISIS " TO THE " REGLES "

(Commission's Reference : Z.N.(S.) 1372)

DOCUMENT 74/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

In the " Discussion " appended to Section 1 of Article 5 of Professor J. Chester Bradley's draft English text of the revised *Règles*, it is stated that the acceptance of the principle of *stare decisis* in connection with the " Law of Continuity " is an implied consequence of the decisions taken at the Copenhagen (1953) Congress. The purpose of the present paper is to examine the meaning of that phrase and to discuss the appropriateness of its recognition as one of the principles on which the *Règles* are based.

2. So far as I am aware (though time has not permitted exhaustive research), the phrase *stare decisis* is not an accepted Latinism in English legal terminology. Its usage in English is generally held to indicate an affected style, and the natural reaction is to translate it into the vernacular as " stick to your guns ". These two factors—the pretentiousness of the phrase in English eyes, and the fact that it is not part of the English legal vocabulary—shew that if the expression were incorporated into the *Règles*, it would mean nothing to many English readers, while others, besides finding it ludicrous, would attribute to it a meaning other than that in which it appears to have been used in Professor Bradley's draft ; for, so far as I can understand, it is not there used in the sense of " stick to your guns ", but in quite another sense.

3. In interpreting the meaning attached to the expression *stare decisis* by Professor Bradley, it is pertinent to note that he gives as his authority Professor Charles H. Blake of the *Massachusetts Institute of Technology*.

Professor Blake discussed the principle involved in a comment on the case of the generic name *Ligia* Fabricius, 1798 published in *Opinion* 330 (1955, *Ops. Decls. int. Comm. zool. Nomencl.* 9 : 321–338). In this *Opinion*, one part of the Ruling given validated the name *Ligia* Fabricius, 1798 and suppressed the name *Ligia* Weber, 1795. Professor Blake's comment was published as paragraph 13 of the *Opinion* cited and paragraphs 2, 3 and 5 of his comment are reproduced here :—

> 2. In 1904 the International Commission regarded Weber's work as legally published in spite of the fact that for more than a century it had not been regarded by most authors as legitimately, that is ethically, published. There seems to be no doubt that Weber was, in fact, a sort of zoological pirate. The question whether Fabricius deliberately crossed Weber up in 1798 when he himself published his own names is not important. The difficulty seems to arise from the fact that the Commission in 1904 took a strictly legalistic view of the matter, and from that point of view their decision is correct ; but they failed to take account of two things : (1) that the non-use of Weber's names had in fact established an unwritten precedent, and (2) that, based on the maxim *stare decisis*, the Commission would have been better advised to have followed that use rather than to overthrow it on technical grounds. Zoological nomenclature as a whole has suffered in part from the fact that unwritten and traditional decisions have been either accepted or ignored in a rather uncertain fashion.
>
> 3. In a previous letter I mentioned the maxim *stare decisis* I believe, and I take the liberty here of quoting from Baldwin's 1928 edition of Bouvier's *Law Dictionary*, pages 1127–1128 as to the view taken of the maxim in the United States and I would assume that the English view of it would be essentially similar. The maxim may be defined as follows : " When a point has been settled by decision, it forms a precedent which is not afterwards to be departed from ". " A court . . . should consider how far its action would affect transactions entered into and acted upon, under the law as it exists ; 11 Tex. 455 " ; " but where a decision relates to the validity of certain modes of transacting business, and a change of decision must necessarily invalidate everything above in the mode prescribed by the former case . . . the maxim becomes imperative . . . 15 Wisc. 691 ".
>
> 5. With reference to file Z.N.(S.) 209, on the basis of usage I think we should certainly accept *Ligia* Fabricius, 1798, in spite of the fact that the Weber application of *Ligia* is older. Here we might argue that *Ligia* is a genus not much treated by American authors who tend to accent Weber and hence the weight of opinion rests on the Europeans. However, this would mean contravening the decision of the International Commission, while upholding it in the previous case. If this be done, then we have in

> effect nullification and while nullification is a time-honoured American method of popular legislation, I think it would be unsafe to introduce it into the legislation with regard to zoological nomenclature. Hence . . . I would like to see the Opinion of 1904 stand in spite of the fact that it may appear to cause some confusion. Here I think, no further confusion will be caused than already exists.

4. It is not clear to me how Professor Blake would have applied the maxim *stare decisis* in the case just quoted. From his paragraph 2 it would appear that the maxim should have been applied so as to preserve the names of Fabricius, 1798 and to suppress the senior homonyms of Weber, 1795 ; from his paragraph 5 I gather that he would have preferred the principle to have been applied so as to endorse *Opinion* 17, that is, to preserve Weber's names. A legal principle that can be applied with equal validity on opposite sides of the same case may be as good as a pension fund to lawyers, but it is not likely to be welcome to zoologists who are concerned to cut the nomenclatorial cackle and get to the taxonomic horses.

5. From the quotations provided by Professor Blake, I gather that a decision once taken *in law* is to be respected as a precedent controlling subsequent decisions *in law.* The only decision in law that could have guided the Commission in 1904 (when *Opinion* 17 was rendered) was the Law of Priority ; no amount of usage by zoologists constituted then, or would constitute today, a decision or precedent *in law.* Had *Opinion* 330 given a ruling on the basis of the maxim *stare decisis*, it could only have endorsed *Opinion* 17. American zoologists are perhaps not surprisingly prone to treat zoological nomenclature like the pioneering of the West, where actions taken in the absence of law, or even in defiance and breach of the law, have gradually come to be regarded as setting legal precedents. There is no reason, however, why a practice that is natural and right in a local and temporary phase of human society should also be right in a world-wide and permanent scientific discipline.

6. From the time when the Commission was first granted Plenary Powers to vary the *Règles* (by the Monaco Congress of 1913), the principle has been strictly observed that usages that have become generally adopted, whether because of the absence of a covering rule, or whether in defiance of a rule, can only be legalised individually after thorough examination of each separate case by the Commission. If all such acts are to be regarded as legitimate as a class of actions, then the *Règles* will cease to have any force. Owing to my inability to understand precisely how Professor Blake would incorporate the maxim *stare decisis* into the *Règles*, I am left with two alternative conclusions : either the maxim would entail the strictest adherence to the Law of Priority, or it would mean the abolition of the Plenary Powers, so that usage alone would prevail. Since either course could lead only to anarchy, I propose that all reference to the maxim *stare decisis* be deleted from the draft *Règles*.

DOCUMENT 33/9

(*continued from page* 996)

Draft " Règles ": Miscellaneous drafting amendments

(Commission Reference : Z.N.(S.) 1329)

By C. E. TOTTENHAM

(*University Museum of Zoology, Cambridge, England*).

(Letter dated 7th May 1958)

Point (1)

Article 7, Section 2(a)(ii) (: 64)

It must be noticed that the description of the nature of the document given in the Draft excludes dealers' printed price-lists from being regarded as " published " within the meaning of the Code. Although they were printed and available to the public on request, they were not issued for scientific study or record (except for the record of the dealer's stock), they were intended for " a restricted audience " namely possible purchasers, they were issued for " particular purposes " namely the sale of specimens and the advertisement of wares, and they were for " temporary use " namely so long as the stock was available.

Since such lists have been used for the establishment of generic names in general use in some branches of Zoology, but have not been used in other branches, their acceptance or rejection en bloc as being " published " or " not published " would be undesirable.

The situation could be easily met by some provision in the Code whereby exceptions could be made in individual cases.

It is proposed, therefore, that there be added to Article 7, Section 2(a)(ii) (page 64) the following paragraph :—

> " Dealers' printed price-lists, since they do not conform to this definition shall not be regarded as " published " except for the sake of well-established generic names which would otherwise be validated under Article 5."

Point (2)

Article 9, Section 1(d) (: 75)

If there are two publications in the same year and the precise date of only one of them is known, any names which are affected by the dates are in a state of instability, since the precise date of the unknown might become known and prove to be earlier. This might affect authorship, synonyms and homonyms. Stability is desirable, therefore it is proposed " If two works were published in the same year previously to 18— and the precise date (or month) of only one is known, nomenclature based on the priority of the known date shall not be invalidated by the subsequent discovery and publication of an earlier date for the supposedly unknown exact date. It can only be invalidated if it is shown that the earlier date has been published in bibliographical or nomenclatural literature subsequent to 1903 and prior to the establishment of the nomenclature in question."

Point (3)

Article 10, " Recommendation " 18 (: 83)

I appreciate the point of the " Discussion " on this " Recommendation " and fully agree with the last sentence. I do not agree with the concluding subordinate clause of the second sentence and consequently do not agree with the first sentence. So many original descriptions are practically useless for the purpose of identification of a specimen simply because comparisons have been made only with one (or more) closely allied species. A phrase like " sculpture of elytra indistinguishable from that of *a-us* " (a well-known species perhaps even of another genus) is much more useful than " sculpture of elytra very much closer and finer than in *b-us* " (a little-known species). Many specific characters are comparative, defy description and are incapable of being figured. Instead of the words in brackets (lines 10 and 11) of the Recommendation it is proposed that the Recommendation should read :—

"And, especially if the latter is little known, if he thinks it would assist in the interpretation of the description, he should make a discreet comparison with one or more well-known and common species."

Point (4)

Article 11, Section 4 (: 90)

This article seems so clear and complete that its application would be simple. Unfortunately this is not so. If a definite emendation of an erroneous spelling itself contains an erroneous spelling of the original valid spelling what is the status ? Is it to count as an emendation and enter into homonymy, or is it to count as an erroneous spelling and not enter into homonymy ? It was a definite emendation and therefore must be classed as such ; on the other hand it was an emendation of an erroneous spelling and not of the original valid spelling, and was an erroneous spelling of the latter and therefore should be classed as an erroneous spelling. I know of one generic name of long established usage whose validity depends on the answer to this question. (Whether the status of this generic name will be determined by Article 5 will depend upon the precise wording of that Article when enacted).

It is proposed that there be added to Section 4 (on p. 91) a paragraph "Doubtful cases. If there is any doubt as to whether a spelling should be classed as an emendation or as an erroneous spelling, the choice should be made in favour of the interpretation which is considered to be most likely to maintain general usage. Notice of the course adopted should be immediately published in the *Bulletin* and if no protests are received within six months of publication the case shall be deemed closed and the Commission shall take whatever action may be necessary to validate the name chosen ".

Point (5)

Article 19, Section 2(c) (: 121—122)

It is proposed that in the **Example** (p. 122 line 3) after '1865' there be added " or merely *Arcus albus* Smith ". This is advisable because in so much of the literature of the last century such a simple statement was the usual practice and still is often the practice : the use of 'nec' is comparatively recent and could not have been used if the designator of the type species was unaware that the species he designated as type was wrongly named owing to a previous misidentification of some other species. In the example quoted the fact that Jones said '*albus* Smith' is a clear indication that he meant *albus* Smith and not some other *albus* whose identity was unknown to him.

Point (6)

Article 19, Section 5(d) (: 132)

It is proposed that another paragraph be added as follows :—

" (iv) If an author has designated a type species for a genus, but in the same publication has employed the generic name for a taxon which excludes that type-species, then that designation does not constitute a valid type-selection. Similarly, if he has cited a type-species for a genus, and in the same publication has employed the generic name for a taxon which excludes that type-species, then that citation shall not be available as a type-designation, if an earlier designation should be found to be invalid.

(**Discussion.** It might be thought that such cases would not occur, but I know of several, including some in recent literature. The addition of the above paragraph to the Draft Code would deal automatically with such cases which otherwise would have to be submitted to the Commission for the rejection of the type-designation. It would thus make it possible to retain the generic names in question in accordance with their general usage.)

Point (7)

Article 22, E (: 165)

It is proposed that there be added to *Recommendation* 9 the sentences : " He should also state whether or not he has verified the bibliographic reference, and if he has not verified it he should state the source (or sources) from which he has copied it. (Editors are requested to see that this Recommendation is complied with.)"

Errors in bibliographic references are very numerous ; the references given are so frequently copied from some previous literature that the errors persist, sometimes for more than a century. If the practice here proposed were adopted, it would be a great help to taxonomists in getting the errors gradually corrected.

[illegible]
1[illegible] JUL 1958

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THE BULLETIN OF ZOOLOGICAL NOMENCLATURE

The Official Organ of

THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Edited by

FRANCIS HEMMING, C.M.G., C.B.E.

Secretary to the International Commission on Zoological Nomenclature

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CASE No. 75

DRAFT "REGLES", ARTICLE 17 : PROVISIONS RELATING TO THE RESTRICTION AND DESIGNATION OF LOCALITIES FOR NOMINAL SPECIES

(Commission Reference : Z.N.(S.) 960)

14 JUL 1958

DOCUMENT 75/1

Comments on the insertion of regulations concerning the revision of type localities into the "Règles"

By **JAMES A. PETERS**

(*Brown University, Providence, Rhode Island, U.S.A.*)

(Enclosure to a letter dated 1st June 1955)

Among the other additions to, and modifications of, the *Règles Internationales de la Nomenclature Zoologique*, adopted by the Fourteenth International Congress of Zoology, held in Copenhagen in 1953, were provisions for the restriction and designation of localities for nominal species (*Copenhagen Decisions on Zoological Nomenclature* ; Hemming, ed., London, 1953 : 26–27, para. 31). This recommendation by the colloquium provides for both the rule of the first reviser and the principle of priority to be applied to establishment of type locality, when the original locality is lacking in sufficient precision or has not been cited at all (i.e., restriction in the first instance and designation in the second). There are several points of importance in relation to the acceptability of this recommendation that do not seem to have been considered. Mayr, Linsley and Usinger (*Methods and Principles of Systematic Zoology*, New York, 1953 ; 244–245) discuss reasons for changing or rejecting type localities, based upon standard practice by systematists, and give several cogent reasons why the rule of priority cannot always apply. The discussion of a specific case which follows serves to emphasize this fact, and should be brought to the attention of the Commission before final printing of the newly revised *Règles*.

The field of herpetology has recently seen a series of papers reviewing and often rejecting certain type locality revisions, and the results of this work should prove of value to the Commission. In brief, in 1950 Smith and Taylor (*Univ. Kansas Sci. Bull.* 33(2) : 313–380) published a list of the type localities of Mexican amphibians and reptiles. In their preparation of the work, they " made an attempt to correct the lack of preciseness in statement of type locality as much as possible, by restricting as many type localities as the present state of knowledge will permit " (*loc. cit.* : 313–314). The type localities of approximately 400 species or subspecies are restricted or designated in the paper. According to the recommendations made by the Copenhagen Colloquium, all are to be accepted, since they comply with the provisions in Section 3, paragraph 31, of the Copenhagen Decisions, which concerns restrictions made prior to its publication. Smith and Taylor, however, certainly did not anticipate fixation of their revisions by the law of priority, for Smith has pointed out that " any considered revision of type locality should be regarded valid until proved wrong " (1953, *Systematic Zool.* 2(1) : 44). Also, Smith and Etheridge (1953, *Herpetologica,* **8** : 153) reject one of the Smith and Taylor restrictions, and re-restrict the name in question to another locality.

Two papers dealing with the Smith and Taylor restrictions have been published by Dunn and Stuart (1951, *Copeia* (1) : 55–61, and 1951, *Science,* **113** : 677–678) in which they discuss both specific instances and the general problem of legality of restriction of type locality. In the *Copeia* article they reject restrictions placed on species from Central and South America, for a number of different reasons. Ten restrictions are refused because the known itinerary of the person who collected the type is not compatible with, i.e., does not include, the locality used for the restriction. In four cases the known range of the species does not include the designated type locality. (See also Peters, 1955, *Copeia.*) In three cases information with the type specimen or in the type description contradicts the restriction. In three cases the restriction is rejected because it forces the identity of two valid names through their restriction to a single type locality. More than fifty otherwise available names will have been lost through this practice, for the new rule will preclude the use of any of these names by later authors, even though a particular subspecies may agree well enough with the type to permit the use of its name (see also Peters, 1954, *Occ. Pap. Mus. Zool. Univ. Mich.*, No. 554 : 18). In one case it was felt that the name might well be wrongly applied to recent specimens which were used as a basis for restriction. In another case the authors felt that Smith and Taylor had " violated priority and first principles ". In three cases the restrictions were considered to be " unnecessary ". Dunn and Stuart finally concluded that " the restrictions of Smith and Taylor were without legal status (" incompetent, irrelevant, immaterial ") and do not consider them as binding on us or other workers" (*Science, loc. cit.* : 678). Their remarks are particularly pertinent in view of the fact that the restrictions now do have legal status, as a result of the retroactive clause.

Even more disturbing is the fact that none of the objections mentioned above has validity today, in view of the present wording of the rules. According to the rules, all of Smith and Taylor's restrictions must be accepted, and, although the rules do not specifically state what recourse is open to one who wishes to reject a particular restriction, it seems obvious that it would require exercise of the Plenary Powers. The rule, as stated, leaves no room for acceptance or rejection of a restriction, but rather specifies that the first published restriction must be accepted, with the proviso that a later author may further restrict it by a selection of some part of an area specified by the previous reviser.

Entirely apart from the points discussed above, which are evidence of an omission from the tentative *Règles*, and of a situation that needs to be rectified before final publication, is a question concerning the philosophical aspects of regulation of type locality designation or restriction by the International Commission. It seems that in this particular case the Commission is leaving the realm of nomenclature and entering the domain of biological fact. Whether the arguments below concerning this are cogent or not, they should not be allowed to obscure the basic points debated above.

The author feels that the original type locality is not an idea or a concept, it is a definite, concrete reality. Every type specimen came from somewhere, and difficulties in assigning a type locality arise only from the failings of man. As a consequence, additional evidence concerning the identity of the type locality may completely alter the validity of an earlier restriction. To my mind, at least, this additional evidence should weigh more heavily than the date of publication of suggested changes. Designation, restriction and rejection must all be based upon evidence, not on fiat.

There appears to be a distinct equivalence between the problem discussed in this paper and the relationship of the rules to the species. It is acknowledged by all systematists that the *Règles* deal only with legalistic or nomenclatorial problems not with zoological ones. The Commission cannot decide on the zoological validity of a species, it can only decide on the nomenclatorial validity of a name applied to a species (or other category). Changes in the zoological validity of a species are made on the basis of accumulated evidence. The same reasoning can be applied to type localities. These have geographic reality just as the species has zoological reality, and the only equivalent of the species name would be the name of the type locality. The Commission ought not to decide on the geographic validity of the type locality any more than on the zoological validity of the species, nor should it try to regulate the handling of purely geographical evidence in a decision on type locality validity by a systematist.

The International Commission has already recognized that the type locality is an entity, and is the equivalent of a taxonomic character, in *Opinion* 52. Here it states that under certain conditions " the type locality becomes a part of the description and is to be considered as an important element in determining the identity of species ". While the Commission can regulate and decide what might constitute an adequate description, it cannot specify what a particular portion of that description is to be. For example, it is within the powers of the Commission to say that a description of a snake species is not adequate unless a labial count is included, but it cannot specify that a particular species must have six labials in order to be valid. Thus, it can require that the type locality must be included in a description to make it adequate, but it cannot specify where that type locality is to be.

Accordingly, I ask the International Commission to consider reducing the proposed rule concerning type localities and their designation or restriction to the rank of a recommendation.

I request further that a statement similar to the following be added to the recommendation, embodying the suggestions made by Dunn (1934, *Copeia* (4) : 172) : the designation and/or restriction of a type locality is to be determined on one or more of the following bases : original description ; data accompanying the type specimens ; collector's notes, itineraries, letters, conversation, or other personal communication ; and, as a last resort only, localities within the known range of the species or from which specimens supposed to belong to the species in question are known to have been taken. The latter basis is to be employed with caution, since it involves the question of accuracy of identification of later material with the species the type represents.

I request further that the International Commission withdraw the recommendation of usage of the principle of priority in questions of restriction or designation of type localities. If the suggestion made above that the item be considered a recommendation rather than a rule be refused, it becomes more important that this clause be removed, in view of the fact that this would then necessitate usage of the Plenary Powers to reject a prior action, and result in an increase of the work load of the International Commission that is totally uncalled for and unnecessary.

I request further that, if the rule be retained rather than reduced to a recommendation, that it should be provided that the restricted or designated type locality must be consistent with all available information on the species, and that a restriction or designation that is not consistent with such information should not be binding upon subsequent authors.

DOCUMENT 75/2

Problems arising in connection with the determination of type localities

By **KENNETH C. PARKES**

(*Carnegie Museum, Pittsburgh, Pennsylvania, U.S.A.*)

(Enclosure to a letter dated 22nd April 1958)

In Professor Bradley's Draft of the revised English Text of the *Règles*, the " first reviser " principle is set up in connection with the designation or restriction of type localities, with the provision that a later author may further restrict a designated or too broadly-restricted type locality. There appears to be no provision for the correction of a designated or restricted type locality believed by a later author to be wrong. I am of the opinion that such a provision should be included.

I think it is important to differentiate clearly between two different kinds of " wrong " designations or restrictions of type locality. The first is represented by cases in which there is tangible, unequivocal evidence that the locality selected by the " first reviser " was not that from which the type specimen came. Such evidence might be in published form, overlooked by the " first reviser ", or, more frequently, unpublished but definite evidence such as information on the label of the type specimen unknown to the " first reviser ", an entry in a manuscript catalogue, or unpublished journals, diaries, or itineraries of the original collector. I believe that if a later author has access to such definite information as to settle for all time the question of the designated or restricted type locality, he should be permitted (in fact, encouraged) to publish a correction, invalidating the incorrect designation or restriction of the " first reviser ", without recourse to any application to the Commission.

In certain other cases, however, the evidence may be less clear, and a subjective element may enter. In some cases the opinion of the later author may be based on taxonomic grounds; the " first reviser " may have designated or restricted the type locality to a place not inhabited, in the opinion of the later author, by the species or subspecies described by the original author. Or there may be some confusion and room for difference of opinion in interpretation of the original author's statements, such that a later author may believe he has a more probable interpretation of the facts upon which to base a designation or restriction. In any case in which there is no unequivocal evidence of the kind described above to settle the matter, I believe the later author should present his case for setting aside the action of the " first reviser " to the Commission as is now done in the case of more purely nomenclatorial matters. The Commission can then weigh the probabilities, and, if the later author seems to have the weight of the available evidence on his side, use the Plenary Powers to set aside the unlikely locality in favor of the likely one. These matters could be placed before specialists for comment just as are matters of nomenclature at present.

DOCUMENT 75/3

Support for the provisions relating to the restriction and designation of localities for nominal species inserted in the " Regles " by the Copenhagen Congress of 1953

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*London*)

(Statement dated 31st May 1958)

At Copenhagen in 1953 the Fourteenth International Congress of Zoology agreed to insert in the *Règles* provisions for the restriction and designation of localities for nominal species (1953, *Copenhagen Decisions zool. Nomencl.* : 26–27, Decision 31). This decision fulfilled a long-felt want and removed one of the most important remaining causes of uncertainty in the interpretation of nominal species. For without provisions of this kind it had proved—and would have continued to prove—impossible in the case of polytypic species described with inadequate particulars as to the provenance of the original type material to determine which of the known subspecies should be regarded as being the nominate subspecies, and to sink as a junior synonym the separate name given to that subspecies.

2. The substance of the decisions taken by the Copenhagen Congress in this matter has been included by Professor Chester Bradley in Article 17 of his Draft of the English text of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 115–116). In introducing this instalment of the decisions taken by the Copenhagen Congress, Professor Bradley added a " Foreword ", in which, after drawing attention to the taxonomic importance of knowledge regarding type localities, he admitted that knowledge on this subject is of importance also in nomenclature where it is necessary in order to determine the taxon to which a given name belongs, and added that this was a situation " most apt to occur in dealing with subspecies ". If Professor Bradley had stopped at this point, no difficulty would have arisen. Unfortunately, however, in a further paragraph headed " Discussion " Professor Bradley added some reflections of his own, in which he questioned the appropriateness of this subject for inclusion in the *Règles* and then proceeded as follows: " Admitting that locality is an important attribute of a subspecies or species, it is no more so than the morphological characters by which the taxon must be interpreted. The type has been set up as the standard of the taxon, the name-bearer, and there can be no dual standard ".

3. I think it unfortunate that, after having participated at Copenhagen in the decision by that Congress to insert in the *Règles* the provisions relating to type localities here concerned, Professor Bradley should have taken the opportunity presented by the invitation to compile a draft on the basis of the Paris and Copenhagen Congress decisions to introduce criticisms of those decisions, advancing objections to them which were not voiced at Copenhagen. In the circumstances, however, some comment on Professor Bradley's observations are certainly called for.

4. Professor Bradley's comparison of the relative importance of a knowledge of the type locality of a taxon on the one hand and on the other hand of that of the morphological characters which that taxon exhibits is of interest as illustrating his views on the taxonomic issues involved, but, as Professor Bradley must be well aware, is wholly irrelevant so long as the discussion is confined to the nomenclatorial field. For, as Professor Bradley admits, a knowledge of the locality from which the original material of a given taxon was obtained is of fundamental nomenclatural significance, while no one can claim that the morphological characters displayed by a given species possess any direct nomenclatorial significance whatever, though subjective characters of this kind are naturally of great importance from the taxonomic point of view.

5. The argument advanced in the concluding sentence of his " Discussion " (quoted in paragraph 2 above) is equally fallacious and beside the point. It is not a fact that the " type specimen system " and the " type locality system " represent opposing elements in what Professor Bradley calls a " dual standard ". On the contrary, both are essential features of a single unitary system. Where a nominal taxon (whether species or subspecies) has a type specimen—either a holotype or a lectotype—the particulars regarding the place of capture of that specimen stated on the label attached to it or otherwise associated with it form a necessary and essential part of the data for interpreting that taxon. Similarly, where a nominal taxon has no surviving type material and a neotype is established for the interpretation of that taxon, the locality where that neotype specimen was obtained forms an essential part of the information provided by the neotype for the interpretation of the species concerned. In both these cases the " type locality " is no more than one of a number of nomenclatorially co-equal elements in the group of data which in the aggregate provide the means needed—at the nomenclatorial level—for the interpretation of the nominal taxon concerned. Professor Bradley's fears are thus seen to be totally groundless, the dangers arising from the friction arising through the anticipated existence of a " dual standard " now being seen to be as non-existent as the " dual standard " itself.

6. There remains for consideration the question of the procedure best fitted for dealing with special cases (a) where the locality cited by the original author is too wide or too vague to be of any practical value, and (b) where the locality provided by that author is later either definitely shown to have been incorrect or is so regarded by specialists in the group concerned. In the case of any nominal taxon falling in either of the above groups and possessing no surviving type material the desired end could be obtained either by the establishment of a neotype or by recourse to the " Designation-and-Restriction " system decided upon by the Copenhagen Congress ; in the remaining cases, that is, in those cases where some type material is still extant the neotype method would not be applicable and the required relief is obtainable only under the " Designation-and-Restriction " system. In those cases where no need has hitherto been felt for the establishment of a neotype, the setting-up of such a type solely for the purpose of providing a " type locality " seems to me to be quite unnecessarily cumbrous and so slow moving as to be quite unacceptable, in view especially of the fact that in this class of case all that is required is obtainable much more readily under the " Designation-and-Restriction " system, a system which, though not given the force of law until the Copenhagen Congress, has, as is well known, been in wide informal usage in numerous groups for many years past.

7. For the reasons set out above the provisions regarding the designation and restriction of localities for nominal taxa (species and taxa of lower rank) adopted by the Copenhagen Congress will be seen to be concerned with a nomenclatorial matter which it is important should be covered effectively—that is, by mandatory provisions—in the *Règles*. Of the two groups of cases concerned one (that comprising the names of taxa for which no type material is extant) the Copenhagen method, beside being the method in common informal use, is simpler and quicker than the neotype system, the only possible alternative, while in the case of the remaining group (that of names of taxa where some of the original material is still in existence) the Copenhagen method provides the sole means of obtaining the required relief. I accordingly strongly recommend that the decision by the Copenhagen Congress for the insertion in the *Règles* of provisions (a) recognising the designation and restriction of localities for nominal species and taxa of lower rank and (b) regulating the use of these procedures be upheld and confirmed.

8. The " Designation-and-Restriction " system approved by the Copenhagen Congress is based upon the principle that matters of this kind should be left to be determined by the " First Reviser ". In this respect therefore the foregoing provisions are fully in harmony with the spirit of the times, the " First

Reviser " principle having been considerably extended both by the Copenhagen Congress and more recently by the Commission through interpretative *Declarations*. No doubt occasions will sometimes arise where, for example, a First Reviser restricts a locality for some nominal species and later investigations will demonstrate or suggest that the " restricted " locality or area specified by the " First Reviser " does not comprise the place where the type material was actually obtained. What should be done in such cases ? It appears to me that the answer should follow the lines already prescribed by the *Règles* in a number of different contexts, as for example, in that relating to the interpretation of nominal genera based upon type species regarded by later authors as having been misidentified, and in that relating to nominal family group taxa based upon similarly misidentified type genera.

9. I accordingly recommend :—

(1) that the decision by the Copenhagen Congress that there be inserted in the *Règles* provisions recognising and regulating the designation and restriction of localities for nominal species (1953, *Copenhagen Decisions zool. Nomencl.* : 26–27, Decision 31) be upheld and confirmed.

(2) that there be inserted a supplementary provision prescribing (a) that a First Reviser designating or restricting a locality for a nominal species under (1) above is to be assumed initially to have designated a locality, or to have restricted the locality specified by the original author in a manner, in harmony with the place of capture of the original type material, and (b) that, if at any later date evidence is forthcoming which, in the opinion of specialists in the group concerned, demonstrates or suggests that the designation or restriction made by the First Reviser was incorrect, the question should be submitted to the International Commission for decision.

CASE No. 76

DRAFT "REGLES": PROVISIONS IN THE EXISTING "REGLES" OMITTED FROM THE DRAFT ENGLISH TEXT OF THE REVISED "REGLES"

(Commission Reference : Z.N.(S.) 1374)

DOCUMENT 76/1

Proposals for incorporating in the Revised "Règles" certain provisions in the existing "Règles" omitted from the Draft prepared by Professor J. Chester Bradley

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

(Statement dated 3rd June 1958)

When the Copenhagen (1953) Congress entrusted to Professor J. Chester Bradley the task of preparing a "first draft of the English text of the *Règles* as amended at Paris in 1948 and as further amended at Copenhagen in 1953" (*Copenhagen Decisions*: 96, Decision 187), it recognised that this would "inevitably be a very laborious and exacting task". It is therefore perhaps not altogether surprising that some of the numerous amendments to the existing *Règles* have been omitted from the draft English text of the revised *Règles*, but it is nevertheless clearly the duty of the Colloquium to consider these omissions and to place the provisions concerned in their proper positions in the revised code. Mrs. Wilson has indicated where these omissions are in her *Index to Professor Bradley's draft . . . by reference to the article numbers in the existing Règles* (*Bull. zool. Nomencl.* **14** : 293–366) and it is the purpose of this paper to present the omitted provisions to the Colloquium in detail, with proposals for their incorporation into the revised *Règles*. These comments and proposals are presented in the order of the draft Articles of Professor Bradley's text.

Article 6/1(d)

This paragraph should be deleted. A name which is held to be offensive on personal, religious or political grounds is available for use in zoological nomenclature until it has been suppressed by the Commission under its Plenary Powers. There are no means whereby the Commission can recognise the existence of such a name until the case has been brought to their attention, nor any means whereby individual zoologists can suppress a name alleged to be offensive on any of these grounds without application to the Commission.

Article 10/2(a)

No rule exists whereby a zoologist can determine whether a new name that he intends to propose is " liable to give offence on political, religious or personal grounds ". The name *Jumala* Friele, 1882 (suppressed in *Opinion* 469) was proposed in a *bona fide* way without any intention to give offence and possessed full status until it was suppressed. The first two lines of this paragraph should be re-worded to read " It is prohibited to propose a new name that is deliberately intended to give offence on political, religious or personal ".

Article 16

By a decision of the Paris Congress (*Bull. zool. Nomencl.* **4** : 68, Decision 5, paragraph 1), a new name published in a form or manner which contravenes any of the provisions of Articles 14 to 16 and 18 to 20 of the existing *Règles* is to be subject to automatic correction. Articles 19 and 20 were deleted by the Copenhagen Congress (*Copenhagen Decisions* : 43 and 57, Decisions 70 and 101), but Article 18 of the existing *Règles* deals, as does Article 16 of the draft revised *Règles*, with the notation of hybrids. It is therefore proposed that a new Section 3 be added to draft Article 16 providing that names formed in a form or manner that contravenes any of the provisions of the Article are subject to automatic correction.

Article 19, Section 3(d)(ii)

It has already been pointed out elsewhere (: 1125, Document No. 68/1) that the term " Linnean tautonymy " was introduced by *Declaration* 29 to describe a condition of tautonymy which arises because a pre-Linnean tautonymous univerbal specific name occurred in the synonymy of one of the species originally included in a nominal genus, and which thus determines the identity of the nominal species which is the type-species of the genus in question. The addition of the phrase " (type by Linnean tautonymy) " at the end of the paragraph referred to has there been suggested.

Article 22

Article 21 of the existing *Règles* provides a definition of the term " author " for purposes of zoological nomenclature. As pointed out elsewhere (: 1164, Document 73/1), Professor Bradley has deleted this Article from the *Règles* and has relegated it to an unofficial " Glossary " ; and a proposal was there made for the inclusion of the authorised definition in a new defining article. It is now suggested that it would be well for the same definition to be inserted as a new Section 1 of Article 22 of the draft of the revised *Règles* ; the existing Sections 1 to 7 would then be numbered 2 to 8.

Article 23/1(a)(i)

The wording of this paragraph illustrates the inconsistency pointed out under Articles 6/1(d) and 10/2(a) above.

The Paris Congress ruled (*Bull. zool. Nomencl.* **4** : 193) that a name found to be offensive on political, religious or personal grounds was to be suppressed for all purposes. In the only case of this kind hitherto dealt with by the Commission, however (the generic name *Jumala* Friele, 1882, see *Opinion* 469), the name in question was suppressed for the purposes of the Law of Priority but not for those of the Law of Homonymy. This is obviously the correct course, since it is the word itself that is objectionable, not its usage in connection with a particular taxon, so that it is necessary to prevent subsequent usages of the same word in a different connection.

Article 24, Section 12

The Paris Congress, in considering emendations to Article 35 of the existing *Règles*, directed (*Bull. zool. Nomencl.* **4** : 163, Conclusion 43) " that, in determining whether two [specific] names, each consisting of an adjective, are homonyms of one another, no account is to be taken of the gender in which either is expressed and accordingly differences in termination due solely to such differences in gender are to be ignored ". This provision, which has been omitted from the draft of the revised *Règles*, should be inserted as a new example (1) in Section 12 of draft Article 24 in the following words : " (1) in adjectival names, in the termination in so far as this indicates only a difference in gender ".

Article 28, Section 13

The Paris Congress, having concluded that specific names formed from the unchanged surnames of modern persons are to be corrected (*Bull. zool. Nomencl.* **4** : 251, Conclusion 13(1) ; see draft Article 28/16(e)) went on to direct (: 251, Conclusion 13(2)) that Article 14 of the existing *Règles* should be emended to show that the provision " that a [specific] name may be a noun in the nominative singular in apposition to the generic name does not apply to [specific] names based on the surnames of modern personages ". This important provision, which has been omitted from the draft of the revised *Règles*, should be added to draft Article 28, Section 13 by making the second example in the first paragraph read " a noun in the nominative singular in apposition to the generic name (except in the case of specific names based on the surnames of modern personages), or ".

Article 28, proposed new Section 15

The Paris Congress concluded (*Bull. zool. Nomencl.* **4** : 140, Conclusion 14 ; : 348, Conclusion 32) that " where a new specific or subspecific name is published in a list of species referred to a given genus and is there preceded by a serial letter or serial numeral, that serial letter or serial numeral is not to be taken as constituting part of the specific or subspecific name in question ". It is suggested that this provision should form a new Section 15 in draft Article 28 ; the sections numbered 15 to 18 would then become 16 to 19.

Article 28/Tables

No reference is to be found in Professor Bradley's draft of the decision of the Paris Congress (*Bull. zool. Nomencl.* **4** : 73, Conclusion 9) " that an Article should be inserted in the *Règles* referring to the Second Schedule (i.e. the present *Appendice*) and making it clear that the provisions included therein were not mandatory but were in the nature of recommendations as to good nomenclatorial practice ". If proposals put forward by the Secretary in Document 55/1 (: 1017 above) are accepted, Sections A to E of the *Appendice* will be incorporated in various *Recommendations* in the draft, so that their recommendatory status in terms of the Paris decision referred to is already clear. It has been suggested in Documents 67/1 and 69/1 (: 1110 and 1146 above) that Sections F and G of the *Appendice* should be associated with draft Article 28 in the form of Schedules ; the Paris decision requires that a statement should be prefixed to these Schedules indicating their recommendatory, as opposed to mandatory, status.

CASE No. 77

DRAFT " REGLES " : THE QUESTION OF THE DATE FROM WHICH CERTAIN PROVISIONS BECOME EFFECTIVE

(Commission Reference : Z.N.(S.) 1321)

Document 77/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

In January 1958, Professor J. Chester Bradley wrote drawing attention to the fact that the Copenhagen Congress left open the question of the dates from which certain provisions which were to be incorporated into the revised *Règles* were to become effective. The present paper presents proposals on these questions for the consideration of the Colloquium. It should first be stated that the question of the time-interval to be allowed during which certain actions (such as the selection of neotypes, the suppression of senior synonyms in the interests of stability, and the suppression of *nomina dubia*) are to be open to challenge, is not dealt with here. Each of the following proposals is related by reference to the appropriate Article of the draft English text of the revised *Règles*.

Article 6/1(m)

C : 41, Decision 64 provided that no name published for a taxon in the Phylum-group or in the Order/Class-group after the introduction of the scheme proposed in Decisions 59 to 69 should be an available name unless the name of the type-genus was published at the same time as the higher-category name in question. Many aspects of the subject of regulating the nomenclature of these groups are to be discussed by the Colloquium (Case No. 25), but it appears that the present issue can be dealt with in isolation, that is to say that, on the assumption that the Copenhagen proposal on this point is accepted, the relevant date can be fixed apart from other considerations. If the Copenhagen proposal is rejected, then the fixing of the date has no further importance.

It is proposed that the date to be inserted in Article 6, Section 1, paragraph (m) be " the date of publication of the substantive text of the revised *Règles* ".

Article 6/7(b) and (c)

C : 63, Decision 115 ruled that, as from a date to be specified, no name should acquire availability by virtue of having been published in a synonymy without fulfilling the other requirements of the Law of Availability. It is proposed that this date also can be inserted as " the date of publication of the substantive text of the revised *Règles* ".

Article 12/1(a) and 2

Professor Bradley believes that C : 38, Decision 62 implies that names in the Phylum-group and in the Order/Class-group published before a date to be fixed are only to be available if they are included in the lists of such names drawn up by the specialist committees envisaged by that Congress. The comments on this matter that have been published as the documents in Case No. 25 make it appear uncertain whether the method of proceeding by specialist committees will in fact be universally adopted, but it may at least be envisaged that the Commission will eventually be called upon to vote upon lists of such names, by whatever means these lists are procured, and that such lists will not be simultaneously available for all Classes of animals. In this event it will clearly be desirable in the interests of uniformity of nomenclature at the Order/Class-group level if *bona fide* lists put forward by specialists (working singly or in groups) and published in the *Bulletin* can, after a suitable interval, be either added to the *Official Lists* or definitely rejected. Once such a list has been voted on by the Commission (assuming that the vote is in favour of adding the names in question to the *Official Lists*), the Commission could be required to publish as an *Opinion* a notice of the fact that the names in the list in question had been so approved ; and the date of publication of this notice could, it is suggested, be the date from which the provision referred to should operate in the group concerned.

It is therefore proposed that Article 12/1, paragraph (a) be emended so that the antepenultimate line shall read " among those proposed prior to the date of publication by the Commission in an *Opinion* of a notice signifying that the names in the list in question are to be added to the *Official Lists* ".

It is further proposed that the first line of the second paragraph of Section 2 of the same article be emended to read " If both names in question have been proposed prior to the date of publication by the Commission in an *Opinion* of a notice signifying that the names in the list in question are to be added to the *Official Lists*.

CASE No. 78

DRAFT " REGLES " (ALL ARTICLES) : PROBLEMS OF DRAFTING ARISING THROUGH DIFFERENCES IN USAGE OF THE ENGLISH LANGUAGE IN ENGLAND AND AMERICA RESPECTIVELY

(Commission Reference : Z.N.(S.) 1336)

DOCUMENT 78/1

Proposals for dealing with problems arising in connection with the preparation of the English text of the " Règles " owing to different usages of the English language in England and America

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Note dated 5th June 1958)

The present note is concerned with the problems of drafting which inevitably arise when it is necessary to prepare an English-language document for international use, for the differences as between practice in England on the one hand and that in America on the other hand in the meaning attached to particular words, in the words used to denote particular concepts and in some cases in the expressions used to convey particular ideas, are bound to lead to ambiguity, if not actual confusion, on one side of the Atlantic or the other, however great the care taken by the draftsman may have been.

2. The foregoing problem which arises acutely at various points in the draft of the English text prepared by Professor Chester Bradley (1957, *Bull. zool. Nomencl.* **14**), is not a new one in the experience of the Commission, it

having arisen already on a number of previous occasions in the course of day-to-day work. The following are examples of cases where this problem presented itself during the Session held by the International Commission in 1948 : (1) the words " wrappers " (English) and " covers " (American) as the term to describe the binder for a portion of a work published in parts, and (2) the words " round brackets " and " square brackets " (English) and " parentheses " and " brackets " (American). In dealing with these cases it was decided that in a document for which the Commission was responsible, both words belonging to any given pair should be included the English-usage word to be cited before the American-usage word, the latter being placed in round brackets (parentheses).

3. It appears to me that it would assist English-speaking zoologists on both sides of the Atlantic if the following procedure were to be agreed upon :—

(1) Wherever in the English text a given word or expression is either not the word or expression which would be correct or the word or expression normally used to denote a particular meaning in England and America respectively, the meaning is to be indicated by the use of two words or expressions, the first the correct form according to English usage, the second, placed in round brackets (parentheses), the American usage.

(2) Any zoologist who may consider it desirable that this procedure should be adopted in any particular instance should submit his suggestions to the Bureau of the Colloquium.

CASE No. 79

DRAFT " REGLES ", ARTICLE 29 : QUESTION OF INCLUDING IN THE REVISED " REGLES " PARIS PROVISIONS ON THE ORGANIC RULES OF THE COMMISSION NOT INCLUDED IN THE DRAFT " REGLES "

(Commission Reference : Z.N.(S.) 1375)

DOCUMENT 79/1

Clauses relating to the " Official Lists " and " Official Indexes ", to the cancellation of " Opinions " for interpretative purposes and to the " Completeness of Opinions " Rule

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

Many passages in Volume 4 of the *Bulletin of Zoological Nomenclature* show that the Paris (1948) Congress gave much thought to regulating the working of the International Commission. The provisions then adopted show further that the realities of the case were kept clearly in mind; for while the Commission functions at all times, the Congresses to which the Commission is responsible meet only once in each five years. Thus, while it is important that successive Congresses should be able to review, and if need be modify, the rules which define the powers and duties of the Commission, it is equally important that the Commission should have some degree of self-control if it is to fulfil the duties laid upon it, and to exercise its powers in the interests of a stable nomenclature, without unnecessary frustration and delay.

2. It was clearly with this situation in mind that the Paris Congress ruled (*Bull. zool. Nomencl.* **4** : 327, Conclusion 16) : that a provision should be inserted in the *Règles* providing :—

(a) that the functions and composition of the Commission and its procedure and other matters concerned with the conduct of its affairs shall be governed by By-Laws to be adopted by the Commission, consisting in part of Organic Articles specifying those matters on which decisions have been taken by the Congress and in part of Articles dealing with other questions relating to the matters aforesaid;

(b) that the Organic Articles to be incorporated in the By-Laws shall not be subject to change by the Commission, except that in so far as the Congress may from time to time vary the provisions in the *Règles* relating to the functions, composition and procedure of the Commission, it shall be the duty of the Commission to amend the relevant Organic Articles to such extent as may be necessary to bring those Articles into harmony with the decisions so taken by the Congress;

(c) that, in addition to, and subject to the provisions of, the Organic Articles, there may be included in the By-Laws such provisions as the Commission may deem to be necessary or expedient relating (i) to the election of officers during inter-Congress periods and the duties to be assigned to each such officer, (ii) to the election of members of the Commission, (iii) to the methods to be followed in voting on matters requiring decision, and (iv) generally to any other matter concerning the conduct of the business of the Commission;

(d) that, subject to (b) above, the Commission may at any time vary its By-Laws to such extent and subject to such conditions as it may from time to time decide to be necessary or appropriate.

The functions, powers and duties of the Commission whose government was to be managed in the manner prescribed in the passage just quoted were re-defined by the Paris Congress in an earlier passage (: 291–292). But while Professor Bradley's draft of the revised *Règles* takes account of these definitions in draft Article 29, no mention is made of the By-Laws which ought, on the instructions of the Paris Congress, to have been included in the *Règles*, nor are any of the detailed provisions of that Congress relating to particular duties and powers considered.

3. The present paper brings before the Colloquium proposals for a more definite version of the Organic Articles to be included as an integral part of the *Règles*. First, as a matter of definition of terms, it is suggested that the subject for discussion should not be the division of the By-Laws into Organic Articles and other Articles, but rather the division of the instrument whereby the Commission is governed into (i) Organic Articles, to be an integral part of the *Règles* and, as such, to be subject to review and modification by the Congresses, and (ii) By-Laws, to govern the day-to-day work of the Commission in accordance with the Organic Articles as these may be from time to time determined by the Congresses.

4. The Paris Congress concerned itself especially with the *Opinions* dealing with individual nomenclatorial cases and with the *Official Lists* and *Official Indexes*. It was directed that the regulations then framed were to be added to the By-Laws, but in the terminology employed here, that is understood as referring to the Organic Rules of the Commission. Before these rules are considered individually, however, it is suggested that many of them can be consolidated into a single clause or article, instead of being broken up under a number of subject-headings with consequent repetition of common factors. There has grown up in the Commission's office the custom of thinking in terms of the " Completeness of *Opinions* Rule ", whereby steps are taken to see that every application covers all the aspects of its case. It is because this was not done in earlier days that the *Directions* series was initiated. The need for these *Directions* has imposed on the Commission's office much work of a peculiarly exacting sort and it is clear that the regulations provided by the Paris Congress were in part devised so as to prevent future sins of omission of this kind. A second clause can cover the provision whereby once the names dealt with in a given *Opinion* have been added to the relevant *Official Lists* or *Official Indexes*, that *Opinion* is repealed except for historical purposes, and a third clause with the various provisions relative to the *Official Lists* and *Official Indexes*.

5. It is therefore proposed that a new Section 2 be added to draft Article 29 as follows :—

" 2. Organic Rules of the Commission.—(a) The functions and composition of the Commission and its procedure and other matters concerned with the conduct of its affairs shall be governed by the succeeding provisions of this Article, specifying those matters on which decisions have been taken by the Congress, and to be known as the Organic Articles of the Commission.

(b) The Organic Articles shall not be subject to change by the Commission, except that in so far as the Congress may from time to time vary the provisions of this Article relating to the Commission, it shall be the duty of the Commission to amend the relevant Organic Articles to such extent as may be necessary to bring those Articles into harmony with the decisions so taken by the Congress.

(c) In addition to, and subject to the provisions of, the Organic Articles, the Commission may devise such By-Laws as it may deem to be necessary or expedient relating to (i) the election of Officers during inter-Congress periods and the duties to be assigned to each such Officer, (ii) the election of members of the Commission, (iii) the methods to be followed in voting on matters requiring decision, and (iv) generally to any other matter concerning the conduct of the business of the Commission.

(d) Subject to (b) above, the Commission may at any time vary its By-Laws to such extent and subject to such conditions as it may from time to time decide to be necessary or appropriate."

If this proposal is accepted, the Sections of Article 29 now numbered 2 to 12 will be numbered 3 to 13.

6. It is further proposed that draft Article 29, Section 7, paragraph (a)(i) be amended to read from line 26 of p. 257 (*Bull. zool. Nomencl.* **14**) " *Bulletin* after the Secretary is satisfied (1) that all names mentioned in the case are correctly cited, (2) in the case of specific names, that these are cited in the binomen in which they were originally published, (3) in the case of generic names, that the correct gender of the name is specified, that the name of the type-species is cited with a full reference to its original place of publication and to the place of its designation, indication or selection as type-species of the nominal genus in question, and that application is made in respect of all family-group names based on the name of the said genus, (4) in the case of names in all categories in the Family-group, the Order/Class-group and the Phylum-group, that the name of the type-genus is cited with a full reference to its original place of publication and to the place of its designation, indication or selection as type-genus of the taxon concerned, and (5) in all cases, that all relevant bibliographic references have been supplied."

Subparagraph (vi) of this paragraph should in consequence read " Every *Opinion* rendered hereafter in which a name or names is or are added to the *Official Lists* or *Official Indexes* must include all the data specified in subparagraph (i) above in so far as they are relevant to that *Opinion* ".
B. **4** : 340, 355 ; B. **5** : 104–5

7. It is further proposed that a new subparagraph (vii) be added to the paragraph referred to, as follows :—" (vii). When the names dealt with in a given *Opinion* have been added to the relevant *Official Lists* or *Official Indexes*, the *Opinion* in question shall be cancelled for all except historical purposes ".
B. **4** : 332, 334–5

8. It is further proposed that draft Article 29, Section 9, paragraph (e) be amended to read :—" The Commission shall compile and maintain the undermentioned *Lists* and *Indexes*, to be annexed to the *Règles* as Schedules . . . " and that the following additional reference be cited :—" B. **4** : 334, par. 20 ".

9. It is further proposed that new paragraphs (f) to (j) be added to this Section, as follows :—" (f) Regulations concerning the *Official List of Specific Names in Zoology* ".—

(i) A specific name once added to the *Official List* is to be used in preference to any other name for the species in question and that name is not to be replaced by any other specific name even if later it is found either (1) that the specific name in question is not an available name or (2) that it is not the oldest available specific name for the species in question, unless the Commission shall so direct.

(ii) The names to be included in this *Official List* shall include (a) every specific name validated by the Commission under its Plenary Powers, (b) every available specific name on which the Commission has rendered an *Opinion*, (c) the name of the type-species of any genus the name of which is placed on the *Official List of Generic Names in Zoology*, save that where such a name is not, either objectively or subjectively, the oldest available name for the species in question, there shall be added to the *Official List* the oldest available name for the taxonomic species concerned, (d) the oldest available name for species of importance in medicine, agriculture, veterinary science and other fields of applied biology, in stratigraphy and in the teaching of zoology, (e) the oldest available name for species the nomenclature of which the Commission, in consultation with specialists concerned, considers it desirable to stabilise.

(iii) The insertion on the *Official List* of a given specific name is not to be interpreted as an expression of opinion on the taxonomic question whether the animal so named should be regarded as a distinct species or as a subspecies of some other species.

B. **4** : 270, par. 42(1)

(iv) Specific names originally published as the names of subspecies (but now regarded as the names of species) and specific names, whether originally published as specific or as subspecific names (but now regarded as subspecific names) are equally eligible with names originally published as, and still regarded as, specific names, for inclusion in the *Official List*.

B. **4** : 627, par. 61(1)

(g) Regulations concerning the " Official List of Generic Names in Zoology ".—

(i) A generic name that has been placed on the *Official List* is to be used, in preference to any other name, for the species which is the type-species of the said genus, save that where the Commission places on the *Official List* the names of two genera the type-species of which are regarded by some systematists as belonging to different genera but by others as being congeneric with each other, the later published of the two generic names in question is for use only by those workers who regard the respective type species of the two genera concerned as not being congeneric with each other.

(ii) The names to be included in this *Official List* shall be (a) every generic name validated by the Commission under its Plenary Powers or for which the type-species has been similarly designated, (b) the name of every genus, when an available name, in respect of which or of its type-species the Commission has rendered an *Opinion*,

(c) the oldest available name for genera of importance in medicine, agriculture, veterinary science and other fields of applied biology, in stratigraphy and in the teaching of zoology, and (d) the name of any genus which the Commission, after consultation with specialists, considers it desirable to stabilise.

(iii) Where a generic name belonging to (b), (c) or (d) above is found, after having been placed on the *Official List*, either not to be an available name or not to be the oldest name available, there being an older name for a genus having as its type-species a species either subjectively identified with or subjectively regarded as congeneric with the type-species of the genus in question, or to have as its type-species some species other than that attributed to it in the *Official List*, the generic name in question is not to be discarded in favour of some other generic name or used in a sense different from that specified in the *Official List* unless the Commission shall so direct.

B. **4** : 267, par. 41(1)

(h) Regulations concerning the " Official List of Family-Group Names in Zoology ".—

(i) The *Official List of Family-Group Names in Zoology* shall be subject to rules similar to those prescribed above for the *Official List of Generic Names in Zoology.*

(ii) The only entry to be made in this *Official List* in respect of any name shall be a reference to the first publication of that name, irrespective of the category within the Family-Group to which the taxon so named was then assigned.

C : 37, par. 58

(i) Regulations concerning the " Official List of Names in the Order/Class-Group in Zoology " and the " Official List of Names in the Phylum-Group in Zoology ".—

(i) The *Official List of Names in the Order/Class-Group in Zoology* and the *Official List of Names in the Phylum-Group in Zoology* shall be subject to rules similar to those prescribed above for the *Official List of Family-Group Names in Zoology.*

(ii) The only names to be entered on these *Official Lists* shall be those so directed to be placed by the Commission after the names in question have been submitted to the Commission by interested specialists and published in the *Bulletin* at least two years prior to the taking by the Commission of a decision in the cases of the names in question.

C : 39, par. 62(5)

(j) Regulations concerning the " Official Indexes of Rejected and Invalid Names in Zoology ".—

> " (i) The *Official Indexes of Rejected and Invalid Names in Zoology* shall give particulars of all names which the Commission has suppressed under their Plenary Powers and all names which the Commission has otherwise declared to be unavailable or non-existent."

10. If the proposals contained in Paragraph 9 above, which embody provisions which, by the direction of the Paris Congress, form an integral part of the *Règles*, are approved, the paragraph of Section 9 of draft Article 29 now numbered (f) will be numbered (k).

DOCUMENT 79/2

Proposed correction of certain errors in the Draft of Article 29 relating to the International Commission on Zoological Nomenclature and proposed rejection of certain new proposals included in that Draft and (b) in the Draft of certain other Articles associated therewith

(Commission Reference : Z.N.(S.) 1375)

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 12th June 1958)

The present note has been prepared in the light of a careful examination of Article 29 of the Draft of the English text of the *Règles* in which Professor Chester Bradley has attempted to bring together the various decisions taken by the International Congresses of Zoology in regard to the composition, functions and duties of the International Commission on Zoological Nomenclature. The task cannot have been an easy one and it is not surprising that here and there Professor Bradley should have slipped into error.

2. In the following notes I have ignored the numerous cases where Professor Bradley has employed wording different from that used in the Official Record of the International Congresses and appears to convey a meaning similar generally to that set out in the Congress decisions concerned. I have accordingly directed my attention to those cases where Professor Bradley has either inserted draft provisions differing in some respect from the relevant Congress authority or has on his own motion introduced new provisions favoured by himself for which at present there is no authority of any kind. For convenience of discussion the points raised, some of which are concerned only to secure some minor, but desirable, improvement in drafting, are set out serially so as to correspond with the order in which the provisions discussed appear in the Draft of Article 29.

Point (1)

3. **Section 2 (last line)** : The expression " 6 through 9 " which appears in the last line of Section 2 (1957, *Bull. zool. Nomencl.* **14** : 245) requires elucidation for the benefit of English readers. It is suggested that, when this is done,

this passage should be dealt with under the procedure recommended in Document 78/1.[1]

Point (2)

4. **Section 3, sub-section** (g) **(introductory portion) :** It is suggested that the words " the vacancy " should be substituted for the word " the fact " in line 15 on page 248, for what is relevant here is the fact that a vacancy has arisen and not that the seat now vacant was formerly held by a zoologist of a particular nationality. The wording here recommended corresponds with the established practice of the Office of the Commission.

Point (3)

5. **Section 3, sub-section** (g) **(procedure suggested in sub-points (i) and (ii) and the accompanying notes each headed " Discussion ") :** The process of securing nominations to fill vacant seats in the membership of the Commission is on occasion very delicate, regional, sectional or personal issues confusing and rendering difficult the course to be pursued. What is required is that for dealing with these issues the Executive Committee should be invested with powers of a reasonable degree of flexibility. In my view the provisions as drafted in the portion of the Draft *Règles* noted above are far too rigid. So much so that if they had been in force at the time when not so very long ago a particular seat in the Commission fell vacant a quite unnecessary amount of friction and illwill would have been brought to light but which was avoided by the more flexible procedure then adopted by the Executive Committee.

6. Turning to examine sub-points (i) and (ii) in sub-section (g) (*Bull. zool. Nomencl.* **14** : 248) with these considerations in mind, I should like first to suggest the omission of the proposal now embodied in line 21 that the nominating authorities should be given only a specified limited period in which to submit nominations. Some nominating bodies are very prompt and in their case a time limit would be unnecessary ; other nominating authorities are either dilatory or subject themselves to very slow-moving procedures. In their case the specifying of a date would serve no useful purpose, for it would be quite ineffectual. I accordingly suggest (a) that in (i) (line 21) the words " within a prescribed period " be replaced by words indicating that an early reply is desired or by some equivalent expression, and (b) that in the first line of sub-point (ii) the words "At the end of the specified period, or " be omitted.

7. I consider that it is in the interest of the work of the Commission that the Executive Committee should be free to seek nominations in whatever way it may consider best suited to the special nature of the conditions obtaining

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[1] See page 1206

in the country concerned. I agree with Professor Chester Bradley that the substitution of the word " organisations " for the word " institutions " is an improvement but, although it represents a step in the right direction, it does not in my opinion go far enough. I suggest that in this delicate matter the best course would be to substitute a new provision (i) for the provision so numbered which at present appears on lines 17 to 22 on page 248 of the Draft :—

(i) The Executive Committee shall seek the nomination of well-qualified persons either by the issue of invitations to appropriate leading scientific organisations in the country concerned or otherwise, invitations so issued being accompanied by a request for an early reply and for the supply of particulars of the qualifications of the persons nominated.

8. Unnumbered sub-item printed on lines 23–26 on page 248 of the Draft of the " Règles " : I think that it should be recognised that the national nominating bodies—and also the Executive Committee—will conduct themselves in a responsible manner. I am of opinion therefore that there is no need to include in the *Règles* a provision explaining how pressure—presumably either in favour of, or against, a given zoologist—may be brought to bear upon the nominating authority. It is my experience that, if persons or groups of persons wish to act as pressure-groups, they will certainly do so and not need any guide as to how they should set about operations. From this point of view the provision printed on lines 23 to 26 on page 248 of the Draft is both unnecessary and undesirable. It may be supposed also that a provision of this kind would not be viewed with favour by the nominating bodies. I accordingly recommend that the provision referred to above (page 248, lines 23–26) be deleted from the text.

Point (4)

9. Section 3, sub-section (i)(i) (Election of Alternate Commissioners during Congresses) : Several points arise on the draft of this provision. These are :—(1) The Commission has never been given an unqualified right to elect individuals to be Alternate Commissioners during Congresses, that right having always been subject to the condition that the proposed election of particular zoologists as Alternates shall be subject to confirmation by being reported by the Commission to the Secretary-General of the Congress and to the *Comité permanent* for approval. This provision is no mere formality, for, as I well remember being told by senior members of the Commission at Lisbon in 1935, nominations so submitted had not always been given the required confirmation. (2) As at present drafted, the Commission would be bound to nominate an Alternate in the place of every member of the Commission not in attendance at the Congress concerned. This would run counter to the policy hitherto adopted by the Commission of nominating Alternates at Congresses only to the extent that it may itself judge desirable. In actual practice it is not always possible at

Congresses to find enough zoologists who would be willing to devote the necessary amount of time to service as Alternates, if elected to that position, or who possessed the necessary knowledge of, or interest in, nomenclature to make their participation in the meetings of the Commission of practical value. I may perhaps be allowed to remark that for the reasons set out above the number of Alternates nominated never equalled the maximum number of (temporarily) vacant seats at any of the meetings of the Commission and the Congress that I have attended. I accordingly now recommend that in order to meet the two points discussed above the text of sub-section (i) of Section 3 (page 249, lines 17–23) be redrafted as follows :—

> (i) **During Sessions of the Commission held at Congresses.**—At Sessions held during Congresses the Commission may nominate suitably qualified zoologists or palaeontologists from those present at the Congress to be Alternate Commissioners to replace temporarily members of the Commission not in attendance. Nominations so made shall be submitted to the Secretary-General of the Congress for transmission to the *Comitè Permanent* and shall become effective on being approved by those authorities. Alternates shall serve only for the duration of the Session of the Commission concerned.

10. Section 3, Sub-section (i)(ii) (" During leave of absence ") : In Sub-section (i)(ii) of Section 3 it is proposed that the Executive Committee should be given power to elect Alternate Commissioners to fill temporary-short-term vacancies in the membership of the Commission arising through the grant of Leave of Absence to some member of the Commission. In my view this provision is unnecessary and, if adopted, would hardly ever be capable of being brought into operation. For Members of the Commission, seeking Leave of Absence from their duties, normally ask for leave for a few months only. In such cases it would not be worth while to nominate an Alternate, for, after allowing for the time needed by the Executive Committee to find a suitable candidate who would be willing to act and then to elect that zoologist to be an Alternate, the length of time remaining before the expiry of the period of leave of absence of the other Commissioner would be so much reduced as to render the election of the suggested Alternate of little or no practical value. I accordingly recommend that the provision which appears on lines 25 to 28 on page 249 be deleted from the Draft of the *Règles*. A further point in this connection is that no provision is suggested whereby elections of Alternate Commissioners during the absence of Commissioners on leave can be submitted to the *Comité Permanent* for ratification. This requirement can only be met at the cost of imposing yet another delay on the election of such Alternate Commissioners.

Point (5)

11. Suggested Section (j) (Duties of Commissioners) : Professor Bradley has inserted in his Draft a provision (Sub-section (j) to Section 3) in which he has put forward a tentative draft of a section prescribing the duties of the members of the Commission. I agree with Professor Bradley that it would be logical to include such a provision in the *Règles*. As drafted, the provision contains a number of defects of a mostly minor character which will need to be put right before the suggested Sub-section can be regarded as satisfactory. The points in question are noted below :—

(a) **Attendance** : In the draft submitted by Professor Bradley it is not clear whether he is referring to attendance by Commissioners at Sessions of the Commission held during Congresses or to attendance at particular meetings of the Commission during such sessions. It is clearly desirable that attendance should be as good as possible both at Sessions and at individual meetings. The reasons which may render non-attendance inevitable under these heads are, however, likely to be different. As regards the attendance by Commissioners at Sessions of the Commission held in countries—often far-distant—the factors which normally lead to non-attendance are either (1) lack of funds to cover travelling expenses, or (2) inability to obtain the foreign exchange needed to cover travelling expenses even when the necessary funds in national currencies are available or (3) inability to obtain leave of absence to attend the Session of the Commission from the authorities of the institution in which the Commissioner concerned is employed. As regards attendance at individual meetings of the Commission during a Session held at a Congress, the practice has been to ascertain by preliminary consultations what would be the most generally convenient date. It appears to me that no procedure for the formal grant of permission to be absent would be appropriate in the case of complete " Sessions " of the Congress, while as regards attendance at individual meetings of the Commission during a Session formal arrangements for the grant of permission to be absent would not seem to be necessary.

(b) **Voting Duties of Commissioners** : In the passage dealing with the voting duties of Commissioners Professor Bradley has inserted (page 250, lines 13 and 14) a suggested new provision under which a member of the Commission when dealing with a Voting Paper submitted for decision would be free to " notify the Secretary that he is abstaining from casting a vote ". I consider that this proposal is entirely misconceived and should be rejected. The Commission is not a privately established association of persons set up to pursue some general purpose to the best of the combined abilities of its members. If it were such a body, no harm would be done if its members abstained from voting on matters put forward for decision. The Commission on the contrary is an official body with certain specified duties entrusted to it. In these circumstances it would be as inappropriate that members of the Commission should be permitted by their terms of appointment to pick and choose from among the matters submitted to the Commission for decision which to vote on and which to set on one side as it would for judges of a supreme court to abstain from voting on any case brought before the court where they preferred not to commit themselves in public on the issues submitted for decision. We must note here that, although Professor Bradley has given the title " Duties of Commissioners " to this Sub-section of this draft, he has in fact included in it nothing beyond certain provisions regarding attendance and voting. It seems to me that the first item of Sub-section (j) should be one which laid it down that it is the duty of a Commissioner to consider carefully all matters submitted to the Commission for decision and to vote on every such case without fear or favour. The adoption of a provision of this kind which emphasises the judicial nature of the duties of Commissioners and underlines the need for impartiality on the part of Commissioners would set the functions of the Commission against their proper background. If, as I recommend, an introductory provision dealing with this part of the subject on the foregoing lines is adopted by the Congress, it should precede the item relating to attendance (see (a) above). It would also render completely unnecessary the item " (ii) Voting " which at present appears on page 250 of the Draft of the *Règles*.

(c) **Negative Votes :** In the item "(iii) Negative votes " on page 250 of the Draft of the *Règles* Professor Bradley has inserted a provision expressly authorising members of the Commission, when recording a negative vote in any given case, to annexe " an adverse opinion " to his negative vote. I agree that in the circumstances described above a member should be free, if he so desires, to annexe such a statement to a negative vote. I consider, however, that this is a procedure which should only be followed sparingly, for in practice its adoption by a body working by post instead of by sitting round a table as do most judges may give rise to considerable difficulty, especially when it is used by a Commissioner to air his views at the expense of his less loquacious colleagues. That this is no imaginary risk will be seen by an inspection of the older *Opinions* of the Commission. There may be cases where such comments would serve a valuable purpose but such cases are likely to be much rarer than in the old days, since for a long time now the practice has been followed of amending a proposal—by submission of a fresh Voting Paper or otherwise—where after the issue of a Call for a Vote one of the Members of the Commission draws attention to some defect in the proposal submitted. This appears to me to be the proper way of dealing with cases of this kind, where there is any real substance in the issue raised. I accordingly recommend that the item "(iii) Negative Votes " be omitted from the *Règles*. The deletion of this suggested provision will not act as a bar to submission by Commissioners of " an adverse opinion " with their votes on any given case but it does avoid going out of one's way to encourage the submission of such statements, the receipt of which (at best) must lead to delay in order to present to the other side an opportunity of stating their views, an opportunity which, as has always been recognised, must in equity be provided in situations of this kind.

12. For the reasons set out in the preceding paragraph I recommend that the existing text of Sub-section (j) (" Duties of Commissioners ") (page 250, lines 1–18) be deleted and replaced by the following :—

(j) Duties of Commissioners

(i) **Obligations** : It shall be the duty of each Commissioner to consider carefully the evidence submitted in regard to each case placed before the Commission and in the light of that evidence to vote on every such case without fear or favour.

(ii) **Attendance** : It shall be the duty of each Commissioner, so far as possible, to attend each Session of the Commission held during a Congress period and also each meeting of the Commission held during such a Session.

13. Section 3, Sub-section (k) (grant of Leave of Absence) : This provision corresponds with the decision taken in this matter by the Paris Congress in 1948. At that time the idea that members the Commission might appropriately be given leave of absence on personal grounds was a novel one, and in consequence the provision on this subject approved by the Congress was provisional also. Now that we have ten years' experience of the working of this provision, we may conveniently examine how it has worked. As regards this we have first to note that in general applications for the grant of leave of absence have been for limited periods only and have been supported in nearly every case by what were clearly good reasons. In these circumstances it appears to me that the provision that every such application should on receipt be submitted by the Secretary to the Executive Committee for decision which was adopted by a safeguard by the Paris Congress has proved to be unnecessary. I accordingly recommend that Sub-section (k) (page 250, lines 20–25) be replaced by the following revised text.

(k) **Grant of Leave of Absence** : If a Commissioner notifies the Secretary that for reasons then explained he will be unable to perform his duties as a Commissioner, the Secretary shall not refuse to grant Leave of Absence without first having consulted the Executive Committee.

Point (6)

14. Section 4 (Officers) : This Section sets out to regulate the position as regards the Officers of the Commission. In its present form, however, the wording of this Section is inconsistent or at least unhappily chosen, for in the first sentence this Section specifies the titles of three officers as being those of the Offices of the Commission (President, Vice-President, Secretary), while in the last sentence *carte blanche* is granted for the varying of the offices previously specified and for the creation of additional offices. Apart, however, from this inconsistency this sub-section is in its present form much too rigid. It is true that provision is made in the Draft for the variation of the number of Officers by later congresses—a provision which in any case is unnecessary in view of the fact that any part—including this part—of the *Règles* can be amended or revoked by any Congress—but there is no provision for the variation of the number of Officers by the Commission itself during inter-Congress periods. This is a serious shortcoming, for certainly once in my memory it was judged desirable quickly to create new officers during an inter-Congress period. This was in 1938 when following my election as Secretary in succession to Dr. C. W. Stiles (U.S.A), both the Officers (President, K. Jordan ; Secretary, myself) were British subjects ; in order to restore the previously existing geographical balance it was thereupon decided to create two additional Offices, those of Vice-President and Assistant Secretary respectively, to each of which an American Commissioner was then elected. Of these Offices the Vice-Presidency has become a permanent feature of the organisation of the Commission, but the post of Assistant Secretary, as held by a Commissioner, was abolished by the Paris Congress in 1948. I recall this piece of back history—which is not unique—simply to show that it would be most unwise to insert unduly rigid provisions in the *Règles* on the question of the number, etc. of the Officers of the Commission.

15. Similar considerations would apply if any attempt—such as that in the sentence printed in square brackets (brackets) in Section 4 of the Draft of Article 29—were made to define the respective functions of the various Officers of the Commission. For what would be convenient and appropriate with one grouping of Officers might be quite inappropriate or even unworkable with different office-holders or with some different grouping of the Commission's Officers—by which I mean if some change were made (or found to be necessary) in the number of Officers. In this connection it must be noted that the expression " generally appertaining to these offices " use in the draft in relation to the duties of the Officers of the Commission is particularly unfortunate, there being in fact no system which can reasonably be called " generally appertaining ", there being marked differences, for example, between what, I am informed, is the commonly adopted arrangement in the United States and that in the United Kingdom. The use of an expression of the above kind would therefore be most ill-advised, providing, as it would, an opportunity for friction where none need exist. If any definition of the duties of the various Officers were to be attempted, it should certainly take the form of a straightforward enumeration of the functions of each Officer. For the reasons already explained I consider that it would be a mistake to attempt an enumeration of the Officers of the Commission, and it follows from this that in my view there is no place in the *Règles* for an enumeration of the duties of the various Officers of the Commission. Quite apart from this consideration, the present is, in my opinion, a matter for settlement between the Officers of the Commission themselves and the Commission as a whole.

16. For the sake both of clarity and accuracy I suggest that the title of Section 4 (page 251, line 15) be altered from " Officers " (with which it is not concerned) to " Offices " (with which it is concerned).

17. For the reasons set out in paragraphs 14–16 above I recommend that the opening portion of the draft of Section 4 of Article 29, that is, the portion appearing on lines 15–21 on page 251 of the Draft be deleted and that in its place there be inserted a provision on the following lines :—

> **Section 4. Offices :** The number of Offices and the titles of those Offices shall be determined from time to time by the Congresses, it being understood, however, that during inter-Congress periods it shall be open to the Commission to increase or reduce the number of such Offices, if it considers it necessary or desirable so to do, provided that any changes so made are reported by the Commission to the next Congress for confirmation and approval.

Point (7)

18. Section 4, Sub-section (a) (" Eligibility ") : This is a new provision suggested by Professor Bradley and is concerned to lay down who alone are the persons eligible to hold Office in the Commission. I am in agreement with Professor Bradley's object but not with the wording suggested for this provision which I consider obscure and misleading. The purpose of the provision was no doubt to lay it down that the holder of the Office of President now held by Professor Bradley or of that of Secretary, now held by myself, must be a member of the Commission but that, where (exceptionally) an " Honorary " Office is created, such as the Office of " Honorary Life President " now held by Professor Karl Jordan, the holder need not be a member of the Commission. The difficulty which arises here in English as used in England—I do not know what is the American practice in this matter—is that, in addition to the foregoing meaning the word " Honorary " as applied to an Office (or Officer) has the meaning " unpaid ", that is, an Office the duties of which are performed by someone without remuneration. In this sense all the Offices of the Commission are " Honorary " Offices and all the Officers are " Honorary " Officers. I see no reason for complicating this provision by including in it a saving clause in the case of " Honorary " Offices of the kind now held by Dr. Jordan, for it is the essence of such " offices " not only that they are " honorary " in the sense that no duties are attached to them but also that they are bestowed upon persons of distinction formerly but no longer actively associated with the work of the organisation concerned.

19. There is one other small point which calls for consideration here. This is to secure that the wording used, while covering the posts—existing or potential—which it is desired to cover, does not go further and create embarassment by reason—through loose drafting—of covering or appearing to cover administrative posts in the Office of the Commission. The most obvious example of the kind of post which might be called in question if the drafting of this provision was defective, is that of "Assistant Secretary" which, as explained in paragraph 14 above, was formerly what we may call a Commissioner-level post (i.e. an office for which only a member of the Commission was eligible) but which was reduced to its present status of a Secretariat-post (either paid or unpaid) by the Paris Congress in 1948 (1950, *Bull. zool. Nomencl.* **4** : 24–25). It seems to me that this latter risk might best be overcome by applying to Commissioner-level posts the adjective " elective ". This would be clearly intelligible in English where the expression " elective office " is well established, and I hope that it would be equally intelligible to American readers.

20. I accordingly recommend that Professor Bradley's proposal that there be inserted in the *Règles* a provision making it clear who alone are the persons eligible to hold Office in the Commission be approved in principle but that in lieu of the actual provision included in this subject in the Draft—Section 4(a), lines 22–24 on page 251—there be inserted the following :—

(a) **Eligibility** : Only Commissioners shall be eligible for appointment to the elective offices of the Commission.

Point (8)

21. **Section 6(c) (" Plenary Powers ") (two minor drafting points)** : One point of substance arises on Professor Bradley's suggested provision regarding the Commission's Plenary Powers as set out in Sub-Section (c) of Section 6 (*Bull. zool. Nomencl.* **14** : 253, lines 14–25). This matter is discussed in the immediately following paragraph. The purpose of the present paragraph is to draw attention to two minor drafting points which call for consideration. These are as follows :—

(i) The use of the word " Rule " in the expression " suspend any Rule " is unfortunate from several points of view. First, we must remember that the title of the substantive French text starts with the word " Règles " and that throughout that text that word is constantly used in those contexts where the purpose is to refer to the Code as a whole. Accordingly, the use of the word " Rule " at this point in the English text would create a serious drafting difficulty in the preparation of the French text, for, if the word " Règle " were to be used in the present context, it would involve an awkward departure from the sense in which that word is universally applied in relation to the code as a whole. This might be unavoidable if there were some pressing reason why it was desirable that the word " Rule " should be used at this point in preference to any other word. But there is no such reason. Indeed quite the contrary. In the English text the word " Rule " has in the past been restricted to members of a particular series of provisions set out in Article 30 for determining the species to be accepted as the type species of nominal genera. Thus from the point of view of the English text also the use of the word " Rule " at this point is inconvenient and undesirable. I accordingly recommend that in the present context the word " Rule " be replaced by the unobjectionable (and also clearer) word " provision ".

(ii) Throughout the *Règles* the word " Commission " is currently treated as a word of singular number, though this has not always been so in the past. In the present Draft Professor Bradley has correctly adopted the singular number but in the present provision the plural form " they " has inadvertently crept in at the end of line 20. It is recommended that this be corrected by the substitution for the word " they " of the word " it ".

Point (9)

22. Section 6, Sub-section (c) (use of the expression " suspend the Rules ") : At the time when the Plenary Powers were granted to the Commission in 1913, the Resolution of the Monaco Congress conferring the right to use those Powers was a document quite distinct from the *Règles* themselves. At that time therefore it was not illogical for the Monaco Congress of 1913 to speak of suspending the *Règles* of the Berlin Congress of 1901. Even then, however, the use of this phrase was unfortunate, for it was grasped at by the ultra-supporters of priority as evidence that the Plenary Powers Resolution was not only distinct from the *Règles* but in addition was in some undefined way inferior to the *Règles* in status and could therefore legitimately be rejected (as it was by many such zoologists in their day) as not possessing an authority equal to that of the *Règles* themselves. Ever since the decision by the Paris Congress in 1948 to incorporate the Plenary Powers Resolution in the *Règles* the expression " suspend the Rules " has become not only inappropriate and misleading but also incorrect. That this is so has been consistently recognised by the Commission in the preparation of all *Opinions* and other Instruments rendered during the last ten years by the avoidance of the obsolete expression " suspend the Rules " and by the use in its stead of the expression " suspend the normal operation of the *Règles* ". This expression serves to show first that the Plenary Powers provisions are as much a part of the *Règles* as any other part and, second, that their purpose is to provide a means for setting aside in certain circumstances not the *Règles* as a whole—of which the Plenary Powers provision forms part—but a certain part only of the *Règles*, namely, its ordinary or normal provisions.

23. It seems to me that the word " suspend " is in any case an objectionable one to use in the present context, for it conveys an impression that any such action is of a provisional or temporary nature, whereas, as Professor Bradley has correctly and clearly stated in paragraph (iv) of Sub-section (c), " any decision taken by the Commission under its Plenary Powers shall be final and not subject to appeal ". I therefore wish to support Mr. R. V. Melville's proposal (Document 65/1) that the word " vary " be substituted for the word " suspend " in the first paragraph of Sub-section (c).

Point (10)

24. **Section 6 (conditions attaching to the use by the Commission of its Plenary Powers) :** The conditions attaching to the use by the Commission of its Plenary Powers are set out in a series of rules on page 254 of the Draft. These contain three departures from the relevant Congress decisions, one on a subject on which an extensive discussion took place at the Paris Congress and on which the decision reached was taken advisedly in order to ward off a risk which could not be dealt with in any other way. The divergencies concerned are set out below :—

(a) Under the Monaco (1913) rules relating to the use by the Commission's Plenary Powers it was provided that Public Notice of the proposed use of the above Powers in any given case " be given in " any two or more of certain specified serial publications (see *Declaration* 5 published in 1943, *Ops. Decls. int. Comm. zool. Nomencl.* **1(A)** : 31–40). This was a careless piece of drafting, for clearly all that the Office of the Commission could be required to do was to issue certain notices to particular serials ; it could not reasonably be required to ensure that the notices which it issued were in fact published in the serial concerned, for that was a matter which, being solely in the hands of the editors of the serials concerned was not a matter which it was within the power of the Commission to control. In the conditions of confusion and near-panic which reigned at the time when the Plenary Powers Resolution was drafted, it is perhaps not surprising that so strange and illogical a provision should have been inserted in that Resolution, but it certainly is surprising that no steps were taken to put this matter right until the meeting of the Thirteenth International Congress of Zoology, Paris, 1948, when the unworkable provision " given in " was replaced by the expression " given to " (1950, *Bull. zool. Nomencl.* **4** : 56, Conclusion 7(3)).

(b) As regards the serials to which notice should be given of the possible use of the Commission's Plenary Powers, the Paris Congress decided that the choice of these serials should be made by the Secretary to the Commission. This was because it was felt that this was a matter on which it was desirable that considerable discretion should be vested in the Secretary, having regard to the changes in circumstances which might at any time arise in connection with whatever serial might be selected. For example, a change of editorial policy might lead to a reluctance to publish such notices or at least to an unwillingness to do so except at some high charge. If in such circumstances it were to be necessary for the Secretary to obtain a decision from the Commission before being authorised to make any alternative arrangements, unnecessary delays might arise in the handling of current cases involving the possible use of the Commission's Plenary Powers. It was for this reason that the Paris Congress decided to vest in the Secretary personally the responsibility for choosing the serial publications to which the prescribed Public Notices should be given. Unfortunately, in his draft Professor Bradley has overlooked the decision of the Paris Congress in this matter and has suggested that it should be by the full Commission that the choice of the prescribed serials should be made.

(c) At the time of the Paris Congress in 1948 there was a strong general desire that all possible means should be adopted for speeding up the work of the Commission. One of the most serious elements in the delays which had occurred had been the inordinate period during which voting on a given Voting Paper could, and often did, extend. Unfortunately, at that time there was no clear evidence of the amount of time which would need to be allotted to a postal vote if the Commission were working in conditions of reasonable efficiency. It was suggested that a period of six months at the outside should be sufficient for this purpose. Owing to the need for giving priority to work on the preparation, printing and publication of the Official Records connected with the proceedings on zoological nomenclature at the Paris Congress over the important, though less urgent, work involved in dealing with individual nomenclatorial cases, it was not until the year 1952 that it was possible to make a start with the issue of Voting Papers under the revised system approved by the Paris Congress. It was then decided to introduce one technical modification in the procedure previously laid down, namely, to arrange for all Voting Papers, irrespective of destination, to be despatched by airmail. This arrangement, though involving a substantial additional financial burden for the Trust, had the great advantage that it eliminated the substantial delays previously inevitable in transmitting Voting Papers by surface mail to the Commissioners resident furthest away from the Office of the Commission. It was judged that the saving in time so secured amounted to at least three months and that under this revised voting procedure a Voting Period of three months would give the Commissioners concerned as long a period for consideration as that which would have been available to them, if that Period had been one of six months but their Voting Papers had been despatched by surface mail. Accordingly, in the Voting Papers prepared in 1952—the first to be issued since the Paris Congress of 1948—the Prescribed Voting Period was set at three calendar months. The results obtained showed conclusively that the Voting Period allowed was amply sufficient, the whole of the available membership of the Commission—there was at that time one Commissioner with whom it was impossible to communicate—having duly recorded their votes. A report on the procedure so adopted, together with facsimile reproductions of two of the new-style Voting Papers (Hemming, 1953, *Bull. zool. Nomencl.* **10** : 478–491), was submitted to, and approved by, the Copenhagen Congress in the following year (1953, *Copenhagen Decisions zool. Nomencl.* : 92). (In the period since the close of the Copenhagen Congress over 250 Voting Papers issued under the above procedure have secured an equally satisfactory voting record from the members of the Commission.) In the Draft of the *Règles* now under consideration the obsolete word " six " which appears in Professor Bradley's Draft should now be replaced by the word " three ".

25. The recommendations now submitted in relation to the amendment of the drafting of the conditions attaching to the use by the Commission of its Plenary Powers as set out by Professor Bradley on page 254 of his Draft of the *Règles* are the following :—

(1) *Section* 6, *Sub-section* (c)(i)(1) (lines 8–11) : Delete the existing provision and substitute the following :—

> (1) *Serials to which notice is to be given.*—Such notice shall be published in the *Bulletin* and in addition is to be communicated for publication to two other serials, one of which must be published in Europe and the other in America.

(2) *Section* 6(c)(i)(2) (*Selection of serials*).—

> (a) line 14 : Substitute the words " Secretary to the Commission as being, in his " for the words " Commission as being, in its " ;
>
> (b) line 17 : Substitute the words " possible use of the Plenary Powers " for the words " suspension of the Rules " ;

(3) *Section* 6(c)(iii) (*Method of Voting*), line 36 : Substitute " three " for " six ".

Point (11)

26. Section 6, Sub-section (c)(vi)(3) (" This subparagraph retroactive ") : The paragraph here referred to (page 256, lines 20–22) records the decision of the Paris Congress as to the form to be adopted by the Commission in recording decisions for the suppression of names under the Plenary Powers. It is perfectly true that the Congress directed that the decisions in question should be applied retroactively to all cases where the Commission had used its Plenary Powers for the above purpose. There is, however, no need to insert in the *Règles* a special provision to this effect, for all the provisions in the *Règles* are retroactive, save in the very small number of cases where it is expressly stated that a particular provision is to apply only as from a specified commencing date. Incidentally, it may be of interest to note that in almost all the cases to which the subparagraph in question applies the Commission has during the last four years taken express decisions in the sense indicated in the course of the review of its older *Opinions* in connection with the preparations for the publication (on 10th June 1958) in book-form of the First Instalment of the *Official List of Generic Names in Zoology*.

27. It is accordingly recommended that Sub-section (c)(vi)(3) of Section 6 of Article 29 (page 256, lines 20–22) be deleted from the Draft of the *Règles*.

Point (12)

28. Section 7, Sub-section (a) (" **Opinions** ") **:** When during the Secretaryship of my predecessor the late Dr. C. W. Stiles (*Washington, D.C.*), the Commission was first authorised by the Congresses to undertake judicial functions and in consequence when the Commission first began to put forth *Opinions* embodying its judicial findings, Dr. Stiles adopted the expression " render an *Opinion* " as the term to denote the putting forth of decisions of this kind. The word " render " was consistently used by Stiles in connection with the preparation of the *Opinions* for which he was responsible and for their publication in the *Smithsonian Miscellaneous Collections*. When in 1939, (following my election to the Secretaryship) the Secretariat of the Commission was transferred to London and it became necessary to devise a new method for publishing the Commission's *Opinions*, it was decided that in future these should be published as units of consecutively paged volumes of a new work established for the purpose. Once again the word " render " was adopted for the sake of continuity, the title allotted to the new work being " *Opinions* rendered by . . . " This title (amplified by the addition of the word " *Declarations* " after the institution of that class of Instrument) has been in continuous use for the last twenty years. It is accordingly recommended that this expression be retained in the revised text of the *Règles*. Apart altogether from the reasons explained above the expression " publish " which at present appears in the draft is not appropriate, for it concerns not the Commission but the Trust.

29. It is recommended therefore that in Sub-section (a) of Section 7 of Article 29 of the *Règles* (*Bull. zool. Nomencl.* **14** : 257, line 17) the word " publish " be replaced by the word " render " customarily used in this connection. A similar change is required in Sub-section (a) of Section 9 of the same Article (*Bull.* **14** : 265, line 3).

Point (13)

30. Section 7, Sub-sections (b) to (cc) : Section 7 in concerned with the " Judicial duties of the Commission ". As at present constructed, this Section consists of an introductory passage setting out in general terms the judicial functions of the Commission, followed by twenty-seven lettered sub-sections—sub-sections (a) to (cc). The subject matter of these sub-sections falls into very diverse groups. Group 1 consists of the single Sub-section lettered (a). This is concerned exclusively with the procedure to be followed by the Commission when performing its judicial functions. This is a matter which it is clearly appropriate and desirable should be included in the Section under consideration. The second group consists of all the other Sub-sections at present included, namely the items lettered (b) to (cc). These are all concerned with various functions falling within the Commission's judicial field.

31. The question which arises for consideration at this point is one of quite a general character. It is this. Is it helpful in practice or sound as drafting to attempt closely to define the nature of the responsibilities conferred upon a judicial body ? Or is it better that those powers should be specified in general terms only ? Where more than one court is involved—as in the case of central and state courts in countries having a federal constitution—it is clearly necessary that the definition of powers should be sufficiently close to avoid the risk of deadlock arising through conflicting claims as to jurisdiction. We need not, however, allow ourselves to be detained by this consideration, for this particular problem does not arise in the present case where we are concerned with the functions of a single court only. My view is that neither on grounds of practical utility nor on grounds of drafting is it desirable that an attempt should be made in this section to bring together a catalogue of the Commission's judicial functions. Such a catalogue could never be complete for it would never be possible to anticipate every possible type of case on which the Commission might be asked to give a judicial ruling. Not only would such a catalogue be inevitably incomplete but the mere fact of its existence would be calculated to give rise to doubt and confusion, for it could not fail to happen that, while some zoologists argued correctly that the catalogue was incomplete and that it was for this reason that a given function was not specified, others might well argue that the catalogue was intended to be exhaustive and the fact that a given function was not enumerated in it must be taken as meaning that the function was one which did not fall within the scope of the judicial functions committed to the Commission by the Congress. Thus the inclusion of an incomplete catalogue of unfettered judicial functions is not only inelegant as a piece of drafting but in addition it is positively harmful through the likelihood that its insertion might be held to derogate from the generality of the overall provision by which the judicial functions concerned were conferred.

32. For the reasons set out above it is accordingly recommended that Sub-sections (b) to (cc) (both inclusive) be deleted from the *Règles*.

Point (14)

33. In the immediately preceding discussion I have recommended that Sub-sections (b) to (cc) of Section 7 be deleted from the Draft of Article 29 as being unnecessary and misleading. In case, however, it is decided that some at least of the provisions concerned should be retained, it appears to me that it may be convenient briefly to indicate certain points which, it appears to me, would call for attention in connection with certain of the Sub-sections concerned. The points in question are the following :—

(a) Sub-section (k) (" works published on the same day ")

In preparing the Draft for the above Sub-section (page 260, lines 17–20) the compiler has rightly borne in mind that under existing Congress Decisions names published on unknown dates are to be deemed to have been published on the earliest date on which it is definitely known that the names in question were published, a provision which not infrequently has the effect of allotting the same date of " publication " to each of two competing names. Unfortunately, however, in preparing the present draft Professor Bradley failed to provide for the simpler of the two situations which may arise, that is, the situation where it is known for a fact that any two names concerned were published on the same day. This minor defect could readily be put right by inserting the words " on the same day " after the word " published " on page 260 of the Draft.

The provision here under consideration appears in a substantive form in Sub-section (a) of Section 2 of Article 8. As there presented, the Draft contains a number of other defects which require rectification. These are discussed in paragraph 39 below.

(b) Sub-section (q) (" Misidentified type species ")

The duties of the Commission in the matter of the determination of the nominal species to be accepted as the type species of a nominal genus believed by later authors to have been based upon the basis of a misidentification are under Congress decisions subject to very rigorous conditions. The wording of Sub-section (q) (page 261) is presumably not intended to do more than give a general outline of the provisions laid down in this matter but even so it must be admitted that it does this in a very inadequate manner. The substantive provision set out in Section 2 of Article 19 of the Draft (page 121–122) is also very incomplete and unsatisfactory. This will need to be examined in a separate note.

Point (15)

34. Section 9, Sub-section (d)(i) (" Publication of notices in the ' Bulletin ' ") : The long list of items here enumerated will need to be looked at after the examination of the Draft of the *Règles* has been completed for the purpose of making sure whether any items need to be added to it, or deleted from it.

35. In its present form this Sub-section is particularly obscure and unintelligible. It is suggested that this should be rectified by the insertion after each of the Article Numbers cited a few words in brackets (parentheses) to identify the nature of the notice referred to.

Point (16)

36. **Section 10 ("Action that it is not the duty of the Commission ") :** Section 10 of the Draft of Article 29 purports to set out certain matters on which it is said that it is not the duty of the Commission to take action. This suggested Section is not based on any existing Congress Decision and is a novelty put forward by Professor Bradley. I am bound to say that I dislike this provision very much. It seems to me not only to serve no useful purpose but to be actively harmful. The purpose of this provision appears to be to provide the Commission—and still more its Secretariat—with a ready-made alibi, however serious and numerous may be the misstatements of fact or omissions in applications submitted for decision.

37. The policy which appears to underlie this unfortunate suggestion is the exact opposite of that which I have set myself to follow during the time that I have held the Office of Secretary to the Commission. Mistakes on questions of fact have occasionally found their way into applications as published in the *Bulletin of Zoological Nomenclature* in spite of the efforts to promote accuracy and completeness constantly made by the Office of the Commission in conjunction with the applicants concerned. Whenever such mistakes have later come to light, immediate steps have been taken to secure that they are corrected. It cannot be disputed that it is only by the rigorous pursuit of this policy that serious errors in individual cases can be avoided. Further, it is only by the persistent and conscientious application of the highest degree of care that entries on the *Official Lists* can be brought up to the requisite standard of accuracy and completeness.

38. Personally, I should very much prefer to see the provision suggested in Section 10 of Article 29 deleted from the *Règles* altogether. If for any reason it were to be considered desirable that some reference to this subject should be included in the *Règles*, I would suggest that both the title and the wording of this Section should be changed in order to place an entirely new emphasis on the importance of securing the highest attainable degree both of accuracy and completeness. A revised provision on the following lines would remove the major part of the objections to which the existing draft is open, though I am bound to say that the best course would, in my view, be to delete this Section

altogether. The Revised Draft here suggested as a possible replacement of the existing Section 10 (page 268, lines 1–19), the rejection of which in its present form is strongly recommended is now put forward for consideration :

Article 29, Section 10 (Revised Draft)

> Section 10 : Responsibility of the Commission for ensuring as high a degree as possible of accuracy and completeness in all documents issued under its authority : It shall not be the duty of the Commission to secure the highest degree possible both of accuracy and completeness in publications issued under its authority. Where, however, errors of the above kind are found to have been committed by inadvertence or are later detected in the light of new information, it shall be the duty of the Commission to issue the necessary correction with the least possible delay.

Point (17)

39. Addendum : Note on Draft of Section 2 of Article 8 : In the discussion (in paragraph 33(a) above) of certain defects in the draft of Sub-section (k) (" Works published on the same day ") attention was drawn to the fact that there were other and more serious defects in the Draft of Section 2 of Article 8 (page 71, lines 11 to foot of page). In this connection three points require to be noted, of which the first two are verbal matters only, while the third is raised by a serious defect in drafting. The two first points in question are the following :—

(a) In the introductory portion of Sub-section (a) it is correctly stated (line 14) that the point for determination is the relative " precedence " of two names published in certain circumstances. In sub-point (1) (line 16) the word " precedence " is replaced by the incorrect word " priority ".

(b) In sub-point (1) (line 17) and sub-point (2) (lines 20 and 21) occurs the expression " articles or works ". No doubt the meaning intended to be conveyed by the first of these words is " papers published in serial publications " and that by the second " books, pamphlets, etc." published as separate entities. There was considerable discussion at Copenhagen in 1953 on the question of terminology here involved and it was then decided that for the purpose of the *Règles* the colourless word " work " (or " works ") should invariably be employed to the total exclusion of all other terms. What is required therefore is that in sub-point (1) the words " articles or " should be deleted in line 17 and that in sub-point (2) the word " article " at the end of line 20 and the word " or " at the beginning of line 21 should similarly be struck out.

Point (18)

40. Draft " Règles " (throughout) : A point of substance arises in connection with the use in Section 2 of Article 8 (paragraph 39 above) of footnotes. As, however, the same problem arises at other points in the Draft of the *Règles*, it appears more convenient to treat this matter as one of general application for the Draft of the *Règles* as a whole. Footnotes are often useful devices in private works by individual authors but they are totally out of place in a document which purports to be a code of law. If such footnotes were permitted, it would be necessary to insert somewhere in the main text a provision that rules set out in footnotes are to be treated as having equal force with those actually embodied in the main text. By the time that this had been done, it would clearly be much better that the normal method followed in drawing up codes should be followed and that no footnotes should be permitted. This is all the more desirable in the case of a document such as the *Règles* which may be expected to remain in existence for many years, for as time goes on, there will be a natural tendency on the part of editors in a desire to be helpful themselves to add further footnotes. A situation would thus inevitably develop in which zoologists, when reading a given footnote, would at the best be in doubt as to whether what was before him was a definite—though strangely placed—portion of the *Règles* or whether it was some possibly incorrect gloss added by some editor of later date. I therefore strongly recommend that the entire Draft of the *Règles* as published in Volume 14 of the *Bulletin* be re-examined from the above point of view and that any provisions at present set out in footnotes only should now be included at the appropriate point in the main text of the *Règles* and all other footnotes be deleted.

CASE No. 80

DRAFT " REGLES " : THE QUESTION OF THE RETENTION OF THE " NOTIFICATION AND CHALLENGE " PROCEDURE ADOPTED BY THE COPENHAGEN (1953) CONGRESS

(Commission Reference : Z.N.(S.) 1376)

DOCUMENT 80/1

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

The Copenhagen Colloquium on Zoological Nomenclature gave a high priority in its discussions to seven problems bequeathed to it by the Paris (1948) Congress for decision after consultations between interested specialists and the Secretary to the Commission. These problems are listed in title in *Copenhagen Decisions* : 9–10 and the outcome of the discussions is found in Decisions 19 to 76 (: 22–46). In four of these cases the Copenhagen Colloquium, in a sincere attempt to promote the cause of stability in nomenclature, prescribed a " notification and challenge " procedure, the purpose of which was to ensure that no irrevocable steps should be taken without opportunity to comment on the proposals concerned being afforded to all speciaists with a a legitimate concern, and at the same time to limit the length of the delay imposed by taking account of this consideration.

2. The four problems in which the " notification and challenge " procedure was introduced were (i) the question of promoting stability and universality in nomenclature, (ii) the recognition of neotypes, (iii) family-group names and (iv) Order/Class-group names. In addition, this procedure was also made use of in connection with the rejection of secondary homonyms (: 83, Decision 162). The purpose of the present paper is to examine the " notification and challenge " procedure in the light of experience since the Copenhagen Congress and to make appropriate proposals to the London Congress in each case.

3. It is appropriate first to draw attention to the misgivings about the "notification and challenge" procedure already expressed by the Secretary to the Commission (: 339–340 above). The views of one so experienced in the handling of nomenclatorial problems of every sort deserve the most serious consideration in any question concerning procedure.

4. The question of promoting stability and universality in nomenclature : On this subject the Copenhagen Colloquium introduced the "notification and challenge" procedure under two headings, (a) *nomina dubia* and (b) the principle of conservation. The procedure in the former case was laid down as follows (: 24, Decision 26) :—

(1) Where an author considers a specific *nomen dubium* which has been either (a) virtually never used, or (b) used only sporadically in the literature, to be a threat to stability and universality of nomenclature, he may propose the suppression of the name in question by sending a notice to that effect to the Secretary to the Commission, whose duty it shall be to publish that notice in the *Bulletin of Zoological Nomenclature*, and on the publication of such a notice, the action proposed shall provisionally come into effect.

(2) The suppression of the name shall become definitive only after the lapse of ten years from the publication of such notice in the *Bulletin*, during which time any zoologist is to be free to lodge a protest before the International Commission, indicating the particular sense in which he desires to apply the name.

Further provisions were made prescribing (3) the suppression of the *nomen dubium* after ten years if no challenge had been lodged, (4) giving the Commission the duty of deciding challenged cases, and (5) stating that a *nomen dubium*, once suppressed, can only be revived by the use of the Plenary Powers.

5. So far as I am aware, no applications have been made to the Commission for the suppression of *nomina dubia* by means of the Copenhagen procedure, but several undesirable features are apparent in the scheme. In the first place, there is the administrative difficulty of keeping a file, still more a number of files of diverse dates of origin, alive for ten years, during which period changes in the personnel in the Commission's office might well make it difficult to keep track of the progress of such cases. Secondly, it seems unnecessary to invoke so cumbersome a procedure at all if some time later it can be overturned by the use of the Plenary Powers. Thirdly, it is bad in principle for decisions once taken to be reversed, since this would create the impression that zoological nomenclature is even more unstable than it actually is. Fourthly, it is a fact that nearly all the comments on any case are received in the Commission's office within two or three months of the publication of the original application in the *Bulletin* ; after this time, unless counter-comments are submitted, most cases receive little additional documentation. Fifthly, it is most unlikely that zoologists would read back-numbers of the *Bulletin* up to ten years after publication. Sixthly, it is often difficult or impossible for the Secretary to obtain comments on cases from specialists closely concerned, even after repeated requests, and many draft *Opinions* have to be submitted to the Commission for a vote without any comments having been received. For all these reasons, it seems to me doubtful whether the " notification and challenge " procedure is a suitable method for dealing with the problem of *nomina dubia*, and the long-drawn-out machinery and the possibility that a decision once taken can be reversed seems to me to be factors that would in practice actively militate against nomenclatorial stability.

6. In my own experience, *nomina dubia* do not in fact present a very serious threat to stability and universality of nomenclature, since in the fields where I have worked they are generally ignored for practical purposes. It would seem to me better, when faced with a doubtful identification of material under study with a taxon based on a *nomen dubium*, to use an open nomenclature with a " cf." or a " ? " if one's material did not justify the description of a new, objectively defined, thoroughly described and illustrated taxon. But one man's *nomen dubium* may be another man's household word, and many alleged *nomina dubia* are doubtful only because of defective original descriptions or illustrations, and fresh study of the type-material will often remove all reasonable doubt. Rather than initiating suppressive action in advance, I should prefer to await cases of the continued usage of alleged *nomina dubia* that accept and perpetuate the doubtful character of the name in question and then, if mutual discussion proved fruitless, bring the matter to the notice of the Commission, whose action should be called for only as a last resort, after all co-operative attempts by specialists had proved in vain.

7. The Principle of Conservation. The long and earnest discussions of this subject at Copenhagen failed to produce a draft satisfactory to all those present, and it is not, therefore, considered necessary to reproduce here the four alternative versions that were put before that Colloquium (*Copenhagen Decisions* : 119–122). It is sufficient to recall that the final Plenary Session of the Congress accepted a motion by Dr. Carl L. Hubbs that the Commission should be charged with the preparation of a provision limiting the application of the Law of Priority so as to preserve well-known names from being sunk as junior synonyms of overlooked names, with safeguards against abuse by unscrupulous persons ; and that Article 5 of Professor J. Chester Bradley's draft text of the revised *Règles* is directed to the discharge of the responsibility thus laid upon the Commission.

8. Professor Bradley's draft Article 5 contains provisions for a two-year challenge period in proposals for the suppression of senior synonyms. This seems to me objectionable for the same reasons as those alleged above in paragraph 3. Experience shows that those specialists who are determined to submit comments on a particular case do so within a few months after the publication of the first proposal. So far as others are concerned, it is most unlikely that they will search back numbers of the *Bulletin* for cases in which the challenge period is still open. The procedure at present available for getting names added to the *Official Lists* ought to be adequate in all cases.

9. Neotypes. I do not wish to add anything to what the Secretary to the Commission has already said (: 814–815 above) on the question of the " notification and challenge " procedure in this connection, since I find myself in agreement with him.

10. Family-group Names. The " notification and challenge " procedure introduced in *Copenhagen Decisions* : 33, Decision 45 seems to me even more superfluous than in the cases already discussed. An individual taxonomist who wishes to preserve a family-group name that seems to him threatened by the strict application of the Law of Priority has the remedy already to hand. Moreover, under the " Completeness of *Opinions* " rule introduced by the Paris Congress, he must also cover in any application in this connection the name of the type-genus of the family-group taxon with which he is concerned, as well as the name of the type-species of that genus, so that stability will be served at all relevant levels. Here again, a two-years challenge period seems to me unrealistic.

11. Order/Class-group Names. The procedure suggested by the Secretary to the Commission in his Introductory Note to the papers included in the Agenda Paper on this topic (Document 25/1 : 495–496 above) seems to me a better method of approach in these cases than the Copenhagen " notification and challenge " procedure involving a two-year period of guaranteed instability.

12. Secondary Homonyms. I am in agreement with the views expressed by Dr. Sabrosky and the Secretary in Documents 22/1 and 22/2 (: 337–340 above) on this subject.

13. I therefore propose the following emendations to the draft English text of the revised *Règles* :—

(i) That Article 5, Section 5 be deleted.

(ii) That Article 5, Section 3, paragraph (i) and Section 4 be deleted.

(iii) That Article 12, Section 2, second paragraph be replaced by the words contained in whichever of the two " Alternatives " in the Secretary's paper reproduced as Document 25/1 (: 495–496 above) is accepted by the Colloquium.

(iv) That lines 22 to 27 of p. 96 of the draft English text of the revised *Règles* (Article 13, Section 3, paragraph (a)) be amended to read: After the expiry of such period, not being less than six calendar months, as the Commission may in any case consider necessary, it shall be the duty of the Commission to issue directions as to which of the names concerned is to be accepted as being an available name and which is to be rejected as being unavailable.

(v) That Article 20, Section 5, paragraph (d) be replaced by the following: The designated neotype shall be open to challenge for such period, not being less than six calendar months, as the Commission may in any case consider necessary, after which it shall be the duty of the Commission to issue a direction either (a) establishing the neotype in question, or (b) directing by what objective standard the species in question is to be defined.

CASE No. 82

DRAFT " REGLES ", ARTICLE 1, SECTION 3, STATUS OF A NAME GIVEN TO A HYPOTHETICAL FORM

(Commission Reference : Z.N.(S.) 883)

DOCUMENT 82/1

Proposed exclusion from the category of a hypothetical form of a nominal taxon based upon a specimen of a previously described species which has been altered or otherwise treated so as to appear to be a new species

By **FRANCIS HEMMING,** C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

The purpose of the present note is to suggest a small clarification of the provision in the *Règles* embodying the decision by the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* **4** : 144) to incorporate into that instrument the substance of the Ruling originally given in *Opinion* 2 (1910, *Smithson. Publ.* **1938** : 5) on the subject of the status to be accorded to a name given to a hypothetical form.

2. Under the above decision a name based upon a hypothetical form was held to possess no status in zoological nomenclature. The aspect of this subject which calls for further consideration was first brought to notice when in 1955 Sir Gavin de Beer (*Director, British Museum* (*Natural History*)) raised with the Commission the question of the status (a) of the generic name *Eoanthropus* Woodward, 1913, the name bestowed upon the so-called " Piltdown Man " and (b) of the specific names bestowed by various authors upon that " species " (de Beer, 1955, *Bull. zool. Nomencl.* **11** : 171–172).

3. At the time when Sir Gavin de Beer first raised this matter, he advanced the view that in the light of evidence since come to light the name *Eoanthropus dawsoni* Woodward, 1913, should be regarded as a name based upon a hypothetical form and therefore as a name which under the decisions cited in paragraph 1 above possessed no status of availability. He accordingly then suggested that the generic and specific names concerned should be rejected on the foregoing ground and placed on the appropriate *Official Index of Rejected and Invalid Names*. Later, Sir Gavin modified his view in this matter considering that, where, as here, a nominal taxon is based upon an actual type specimen, the name given to that taxon ought not to be regarded as being based upon a hypothetical form, even where that type specimen has been altered in such a way as to give to that specimen the appearance of belonging to a previously undescribed species.

4. In subsequent correspondence it was agreed between Sir Gavin de Beer and the Office of the Commission that the best course would be (i) to withdraw the application referred to above and (ii) in its place ask the Commission to adopt an interpretative *Declaration* in the sense outlined above.

5. As the question discussed above was not one of pressing urgency, it was judged that no harm would result if, instead of being dealt with under the *Declarations* procedure, it were to be held over for submission to the Fifteenth International Congress of Zoology, London, 1958, when the Congress would have before it the draft of the Revised *Règles* containing the amendments adopted by its predecessors in the Paris and Copenhagen Congresses respectively. In the draft since prepared by Professor J. Chester Bradley the provision derived from *Opinion* 2 has been included in Section 3 of the new Article 1 and it is here, it is proposed, that the clarification now suggested should be included.

6. It is recommended :—

(a) that the existing sub-section (i) to Section 3 of Article 1 of the Draft of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 35) be renumbered as sub-section (ii) ;

(b) that the following new provision be inserted as sub-section (i) of Section 3 of the above Article :—

(i) Where a nominal species is found to have been established upon a specimen of a previously-established nominal species which has been altered in order to give it the appearance of belonging to a new species, the name so bestowed is not to be rejected as being a name given to a hypothetical unit but is to adhere to the material to which it was given.

DOCUMENT 1/69

(*continued from page* 973)

New definitions of Organ Genera and Form Genera proposed for the Botanical Code

(Commission Reference : Z.N.(S.) 1056)

By **P. C. SYLVESTER-BRADLEY**

(*University of Sheffield*)

(Enclosure to letter dated 31st May 1958)

Dr. C. A. Arnold, Chairman of the Committee on Palaeobotanical Nomenclature, informs me in a letter dated 16th May, 1958, that he is making proposals for new definitions of Organ Genera and Form Genera as substitutes for those at present embodied in the Botanical Code (see D.1/63, pp. 834–840). As these are likely to be of interest to the Colloquium if it is faced with the problem of formulating definitions for the zoological code, Dr. Arnold's proposals for the new Article PB.1 are set out below.

> Since the names of fossil plants are usually applied to detached parts of which the connections to other parts can seldom be proved, it has been customary to recognize *organ genera* and *form genera* where names of natural genera are not feasible (and which is the case in most instances).
>
> An *organ genus* is created for detached parts (or attached parts if they are considered independently) of the same morphological rank that are obviously related and whose affinity with some natural group is known.
>
> A *form genus* includes parts of plants that are grouped together because of their similarity in form or structure but without regard to possible natural relationships.

DOCUMENT 22/3

(*continued from page* 340)

The Status of Secondary Homonyms and the Concept of Permanent Rejection

(Commission Reference : Z.N.(S.) 1275)

By **PHILIP HERSHKOVITZ**

(*Chicago Natural History Museum*)

(Enclosure to letter dated 21st May 1958)

A rule (cf. Article 25/1) stating in effect that a name once made a junior secondary homonym by anyone must be permanently rejected by everyone not only transgresses into the domain of taxonomy, it also censors the opinions of taxonomists as well.

2. Secondary homonymy is a subjective, frequently an accidental or transitory, and not always a universally recognized, condition. A secondary homonym should be subject to nomenclatural regulation only at the time when, and only by those zoologists who think, a state of secondary homonymy exists.

3. Nearly all names, including all substitutes for rejected junior secondary homonyms, are potential secondary homonyms. A rule providing for permanent rejection of a unilaterally, erroneously, accidentally, or otherwise temporarily caused junior secondary homonym invites instability and confusion in nomenclature as well as gratuitous and unlimited multiplications of names.

4. Section 16 of Article 24, purportedly a safeguard against abuse of provisions concerning permanent rejection of junior secondary homonyms is merely a facet of the same attempt at thought control. The meaning of this provision is that all zoologists must reject all junior secondary homonyms caused by one zoologist unless the International Commission on Zoological Nomenclature publicly stigmatizes that zoologist as having acted in bad faith.

5. To avoid the abuses of the concept of permanent rejection of junior secondary homonyms, the implications of censorship of independent thought contained therein, and the threat of public condemnation of selected zoologists causing secondary homonyms, all references to such permanent rejection and to the challenging of rejection contained in Article 24 of the proposed draft of the *Règles* must be suppressed. It is proposed instead, that the nomenclatural status of a junior secondary homonym be placed on a par with a subjective junior synonym as defined in Article 25, Section 2, to wit :

(1) A name that has been rejected by an author as a junior secondary homonym remains available if

(a) It fulfils all other requirements of validity.

(b) In the opinion of another author a state of homonymy does not exist.

(2) A name proposed in replacement of a rejected junior secondary homonym reverts to the synonymy of the latter at any time a zoologist indicates that, in his opinion, a state of homonymy does not exist.

DOCUMENT 27/8

(*continued from page* 1088)

Comment on the " Principle of Conservation "

(Commission Reference : Z.N.(S.) 861)

By **C. W. SABROSKY**

(*Nomenclature Discussion Group, Washington, D.C., U.S.A.*)

(Enclosure to letter dated 6th June 1958)

[Note by the Assistant Secretary, International Commission of Zoological Nomenclature : The paper here reproduced as Document 27/8 conveying the results of a ballot conducted by the Nomenclature Discussion Group was received in the Commission's office on the same date as the immediately following note was ready to be sent to the printer. The two papers deal with the same general subject and show a community of attitude that is best brought out when both are read together in conjunction with Article 5 of Professor Bradley's draft English text of the revised *Règles*. Initialled R.V.M., 9th June 1958.]

Result of Ballot on Article 5 of Bradley Draft

Section 3—Principle of Conservation

Four alternatives were offered :—

31 votes : " Section 3 should be rejected. The Code should be based on priority in principle as an objective means of achieving ultimate stability and universality. Section 2 offers a sufficient escape mechanism for cases of sufficient importance and severity."

2 votes : " Section 3 should be rejected but a recommendation should be inserted under Section 2 (Suspension of the Rules) reading essentially as follows : 'Due consideration should be given to current usage'. "

no votes : The section should be accepted in principle, but revised to clarify terms as " current use ", " widely used ", and " some part of fifty years preceding ".

no votes : The section should be accepted essentially as it stands (essentially means except for minor editorial changes).

Section 4—Overlooked Names

Three alternatives were offered :

30 votes : " The section should be rejected. It is impossible to define ' long-overlooked ' satisfactorily, it is unwise to require that these names be treated as proposed in the section, and it is undesirable to add the extra bookwork for zoologists ".

1 vote : " The section should be accepted in principle, but revised to clarify the term ' long overlooked ' ".

1 vote : " The section should be accepted essentially as it stands ".

1 vote cast for either the first or second of the above choices.

Section 5—" Nomina Dubia "

Three alternatives were offered :

29 votes : " The section should be rejected, as adding needless bookwork. Normal process should be allowed to operate, i.e., ignore the name, except for homonymy, or clarify its zoological status ".

2 votes : " The section should be accepted essentially as it stands ".

1 vote : " The section should be accepted in principle, but subject to drafting amendments ".

1 vote : either the first or the third of the above choices.

The relative uniformity of the voting makes it easy to summarize the voting. The following votes were received, listed by fields of specialization :—

Parasitology : John S. Andrews, George R. LaRue, John T. Lucker, Allen McIntosh, Benjamin Schwartz.

Acarology : Ivan Huber.

Entomology : B. D. Burks, A. B. Gurney, Phyllis T. Johnson, Sophy Parfin, Louise M. Russell, C. W. Sabrosky, Alan Stone, E. L. Todd, W. W. Wirth, L. W. Yates.

Invertebrata (Neozoology): Frederick M. Bayer, T. E. Bowman, Fenner A. Chace, Jr., J. P. E. Morrison, H. A. Rehder, H. B. Roberts (some of these also work on fossil forms).

Ornithology: H. G. Deignan, A. Wetmore.

Ichthyology: Robert H. Kanazawa, E. Lachner, W. R. Taylor.

Paleontology: Preston E. Cloud, Jr., J. T. Dutro, Jr., W. A. Oliver, Jr., G. Sohn, W. P. Woodring, Ellis Yochelson.

Votes

Section 3: 31 votes for the first alternative listed above;

2 votes (Wirth and Woodring) for the second.

Section 4: 30 votes for the first alternative listed above;

1 vote (Parfin) for the second alternative;

1 vote (Wirth) for the third alternative;

1 vote (Lachner) for either the first or second alternative.

Section 5: 29 votes for the first alternative listed above;

2 votes (Huber, Wirth) for the second alternative;

1 vote (Parfin) for the third alternative;

1 vote (Lachner) for either the first or third of the above choices.

DOCUMENT 27/9

Objection to the Introduction of a " Principle of Conservation " into the " Règles "

(Commission Reference : Z.N.(S.) 861

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

Ever since the existing *Règles Internationales de Nomenclature Zoologique* were first promulgated by the Berlin Congress, successive International Congresses of Zoology have witnessed an unceasing struggle between those who feel that unswerving fidelity to the Law of Priority will best produce a stable and universal nomenclature, and those who stand out for the conservation of long-used names that ought to be replaced under a strict interpretation of that Law. The latter school have gradually, but almost continuously, gained ground, their most notable victory to date being undoubtedly the granting by the Monaco Congress in 1913 of Plenary Powers to the Commission, to enable it to vary the application of any Article in the *Règles* in the interests of stability and universality of nomenclature. The first stirrings of a movement to write a Law of Prescription into the code were heard at Lisbon in 1935 and a definite proposal to this end was laid before the Paris (1948) Congress by Dr. Lemche. Finally, in 1953, the Copenhagen Congress, having rejected four alternative drafts, charged the Commission to produce a version for consideration by the London Congress. This is draft Article 5 in the draft of the revised *Règles*. Meanwhile, at the XIX International Geological Congress at Algiers in 1952, the International Paleontological Union considered the same subject on the basis of proposals put before it by Professor R. C. Moore and the present writer. So wide, deep and strong were the differences of opinion, however, that the meeting broke up in disorder without voting on any motion.

2. There can be little doubt that the opponents of the strict application of the Law of Priority were right in their original contèntion that stability and uniformity of nomenclature could be gained more quickly, with less friction and with more credit to the good name of zoology if long-familiar names were preserved from attack on legalistic grounds. In arguments of this kind, however, there is seldom any such thing as complete victory. The aim is a stable, uniform and universal nomenclature ; that is, a condition in which every species has but one name, and every name but one meaning, in all countries and for all time. But it must be accepted that the ideal is unattainable so long as taxonomic differences of opinion are permitted. No systematist can be dictated to in the matter of accepting his colleagues' identifications. All that can be ensured is that every objective type (holotype, lectotype, neotype, type-species or type-genus) shall have but one name. The association of other specimens or taxa with the relevant type under the same name must always remain a matter of personal decision.

3. It therefore seems to me that, by pressing their case too strongly, the conservationists risk defeating their professed ends. Extremism may score points over the defenders of priority, but it will not achieve stability. Pursuing a defeated enemy to destruction may be good tactics, but it is bad strategy when both parties have to work together after the fight. Priority is, after all, the only objective test of availability, and without it there can be no acceptable code. I feel that the supporters of a Law of Prescription are doomed to defeat on three grounds if they insist on their demands being met in full. First, they are divided among themselves in what they want to attain and in the best method of attaining it : secondly, it is impossible to define the desired law in a way that will cover all possible cases without lying open to serious abuse : thirdly, I believe that the law they seek to include in the code is a constitutional impossibility.

4. Comments on Professor Bradley's draft article incorporating the Principle of Conservation are reproduced on pp. 621–642 and 911–913 of this volume. They show that ideas on the subject are still diverse, to such an extent that their reconciliation in a single article seems impossible. Dr. Philip Hershkovitz (: 630–632) at first proposed that a line should be drawn between the first Linnean century (1758–1858) and subsequent time, and that names proposed during the first century but not subsequently adopted should be regarded as unavailable. Later, however, (: 911–913) he recommended that " any principle, rule or law that specifically provides for annulment or circumvention of the Law of Priority shall not be incorporated in the International Rules of Zoological Nomenclature ". Professor Hobart M. Smith (: 633–636) was particularly concerned with interchange of meaning between specific names within a single genus. Dr. Henning Lemche, by whom the first request for a Law of Prescription was made, in 1948, stressed the importance (: 639–642) of putting the onus of work on the name-changer rather than on the conserver of usage. Neither Professor Bradley, nor Professor Smith, nor Dr. Lemche have produced a numerical basis for the proposed Law that can give general satisfaction, for although Dr. Lemche sticks to his original

" fifty years ", Professor Smith rightly points out that a vast amount of usage can grow up in a very short space of time.

5. All those who have concerned themselves with attempts to frame a Law of Prescription have recognised the essentially subjective nature of the matter. It is to my mind impossible to define numerically the amount of usage that a junior synonym must have enjoyed to qualify for conservation, or the amount of neglect that a senior synonym must have suffered to necessitate its rejection in a way that will cover both the household words of applied zoology (in the medical, agricultural, veterinary and geological fields) and the usage of highly restricted specialist fields ; five usages in the latter may be as important to those concerned as five hundred in the former.

6. The Law of Priority has been a fundamental part of zoological nomenclature since the earliest days of the binominal system. It is surely bad constitutional practice to write into any code a law that expressly contradicts one of the basic principles on which that code is based. I do not believe that Professor Bradley's draft Article 5 will be found any more acceptable by the London Colloquium than were any of the several drafts considered at Copenhagen. I believe that the position as it stands under the existing *Règles* has been insufficiently considered. This position stands as follows : (a) the Commission has been granted Plenary Powers to vary the application of any article in the *Règles* and has been instructed to use these powers " for the purpose of preventing confusion and of promoting a stable and universally accepted nomenclature " ; (b) the Preamble to the *Règles* expressly draws attention to this point ; (c) the Paris Congress laid it down in the clearest terms that the *Official Lists* were to be used especially for the conservation of names of importance in applied zoology and in the teaching of zoology. With these safeguards in existence, any zoologist who allows a firmly entrenched junior synonym to be replaced by an overlooked name of higher priority has only himself to blame.

7. Dr. Lemche (: 641–642) would prohibit zoologists from using available names unless they can cite references in support of their action, but this seems to me an unconstitutional provision. If an author A revives an overlooked name in a way that, in his opinion, does not threaten an established name, and if a later author B considers that the taxon for which A revived the overlooked name is subjectively identical with a taxon for which a junior synonym is in current use, then it is wrong to stigmatise A for what he did. Assuming that his action was legal from the point of view of the Law of Priority, then it is absurd to pretend that it was illegal from the point of view of some other article. He may be held by some to have acted against the spirit of the law, but it would be foolish to attack him on the letter of the law. The co-existence in one code of diametrically opposed articles cannot possibly contribute to stability and universality of nomenclature.

8. I therefore propose that draft Article 5 be deleted, and that *Recommendations* 2 to 4 be incorporated in the *Preamble* in the following words : Any zoologist who finds that a name in current use is objectively invalid, and who considers that that name ought to be validated in the interests of stability and uniformity in nomenclature, should at once take steps to have the invalid name placed on the relevant *Official List* and the objectively identical names placed on the relevant *Official Index.* Any zoologist who considers that the stability of a long-established name is threatened by the existence of one or more subjective senior synonyms should at once take steps to have the long-established subjective junior synonym placed on the relevant *Official List* by the use of the Plenary Powers. The subjective senior synonym or synonyms shall thereafter be available for use only by those zoologists who consider them to represent taxa different from that represented by that name added to the *Official List* as a long-established subjective junior synonym.

DOCUMENT 33/10

(*continued from page* 1188)

Miscellaneous Comments on the Draft of the "Règles"

(Commission Reference : Z.N.(S.) 1329)

By **L. W. GRENSTED**

(*Consulting Classical Adviser to the International Commission on Zoological Nomenclature*)

(Letter dated 17th May 1958)

I think that Points (83) and (84) in Dr. Sabrosky's paper (Document 33/4 ; *Bull. zool. Nomencl.* **15** : 795) are unnecessary and there is in any case a mistake as to ' noma '. It would be possible to put *Piesma* in as an example, but it is a classical Greek word in its own right and not really an example of a name consisting of a *compound* word. The example given, *Pseudostigma*, really covers Dr. Sabrosky's point. I don't quite see the point, in (83), about -noma.

On Point (84), *there is no classical Latin word ' noma '*. There is a rare word ' nome ', plural ' nomae ', but it is very doubtful whether this has ever been used in zoological nomenclature. There may be names based on the common Greek *νόμη* (' pasture ' or ' distribution ') and Latinised as -nŏma. But the ant *Tapinōma* Foerster is simply the Greek noun *ταπέινωμα*, and has nothing to do with *νόμη*. In any case the Rule as drafted (*Bull. zool. Nomencl.* **14** : 213) fully covers the possibilities. It is not necessary to bring in cases where names like *Eurydema* have quite different types of derivation. They just don't come under this Section.

My real point is that ' noma ' must not be cited as a Latin noun. The draft seems quite adequate as it is.

DOCUMENT 33/11

Draft " Règles ", Article 28, Table 2, Part B.

(Commission Reference : Z.N.(S.) 1329)

By **R. V. MELVILLE**

(*Assistant Secretary, International Commission on Zoological Nomenclature*)

This document summarises correspondence between the Secretary of the International Commission and Professor J. Chester Bradley, Professor L. W. Grensted intervening, on the question of rendering the Greek word σάλπιγξ in Roman letters in Item 17 of Part B, Table 2 under Article 28 of the draft *Règles* (*Bull. zool. Nomencl.* **14** : 240, lines 12, 13).

2. In the typescript draft of this table sent by Professor Bradley to the office of the Commission for publication, the words and letters in Roman type in columns 1, 2 and 4 of Item 17 read " gs salpiggos salpigs ". Mr. Hemming wrote to Professor Bradley (2nd October 1957) pointing out that in Greek words in which the letter gamma immediately precedes any of the letters gamma, kappa, xi or chi (i.e., words in which the pairs of letters γγ, γκ γξ or γχ occur) the pronunciation was as though the first letter of each of the pairs mentioned was an " n ". He had therefore altered the words in the columns referred to to " nx salping-os salpinx " (that is, into the form in which they appear in the printed draft) and had added a footnote supplied by Professor L. W. Grensted, Consulting Classical Adviser to the International Commission, reading " The Greek γ in this position before γ, κ, ξ or χ was sounded as " n " and was always so transliterated when taken over into classical Latin, e.g., Syrinx (from Σῦριγξ), giving the genitive Syringis (from Σῦριγγος) ". This footnote now appears on p. 240 of the printed draft. Mr. Hemming explained that he had done this because otherwise there would have been, for zoologists without knowledge of Greek, a puzzling lack of connection between columns 1, 2 and 4 of this item and column 7, where the word SYRINGIDAE appeared in the typescript (as it does in the printed draft).

3. Professor Bradley replied (20th October 1957; five weeks before the draft was published) saying that " 'salpigs' for 'salpinx' was a dreadful error", but on 16th January 1958 he said "when you wrote me about SALPINGIDAE I failed to note that the first three columns of my table (as stated in its headline) give the actual equivalents of the Greek letters, not Latinizations, and it has therefore been necessary to change these back into their original form". He suggested revising the entries in columns 1, 2 and 4 of Item 17 to read "gx salpigg-os salpigx" while leaving "SALPINGIDAE" in column 7.

4. Professor Grensted then commented (30th January 1958) that he much preferred the version given in the printed draft and added "I see, of course, Bradley's point, which was to give an exact transliteration. But it leaves SALPINGIDAE quite unexplained (and SPHINGIDAE, etc. with it)". He suggested altering the entry in column 1 to read $\begin{array}{l}\gamma\xi\\ \mathrm{gx} = \mathrm{nx}\end{array}$ and leaving the rest of Item 17, note included, unchanged.

5. On 7th March 1958 Mr. Hemming wrote to Professor Bradley pointing out that "nx" had been agreed in correspondence before the draft had been published and that it would thus be both unfair to himself and to Professor Grensted, as well as incorrect, to introduce the change suggested by Professor Bradley (in a proposed corrigendum) without some explanation, and he invited Professor Bradley to contribute an explanatory note referring to the correspondence. He added that the object of the Table was to help zoologists with no knowledge of Greek and that hence an unqualified transliteration would, in this case, be misleading.

6. Professor Bradley replied on 14th March 1958 quoting the headline to Table B (as corrected; *see Bull. zool. Nomencl.* **14** : 368) and added :—

> No one can dispute that the equivalents of the Greek letters "γ" and "ξ" are "g" and "x", and that it is only when we Latinize a word containing them in combination that we write "nx". Therefore it would be quite wrong to let the first, second, and fourth columns of line 13 [i.e., Item 17] stand as printed unless some special exception were made to show that the introductory statement of the table did not apply to that line.
>
> When you called my attention to what appeared to be erroneous spellings in line 13, namely, "gx", "salpiggos", and "salpigs", I readily agreed with you and was astounded that I should have made such a mistake, but that was because the table had been prepared over two years previously and I had completely forgotten my expressed intent to adhere in those four columns to the strict equivalents of the Greek letters in the Latin alphabet, and to avoid any Latinization. Of course I should have restudied the table as a whole, and especially the introductory lines, but I did not. Had I done so I would not have agreed to the change that was made.

I do not agree that " the formula in the shape now suggested leaves Salpingidae quite unaccounted for " because the printed footnote explains at a length that could not be put into the table why the form of the family name is " Salpingidae ", as does Appendix F of the *Règles.*

My only purpose for entering the Latin letters at all was so the Greek characters would become intelligible to those unfamiliar with the Greek orthography. Had I entered into Latinizations, this purpose would have been defeated and the whole matter would have become complicated. I should have had also to write " c " for kappa, " y " for upsilon, etc.

Since there is no dispute between any of us as to fact, but only as to method of expression, I can see no good purpose in referring to earlier correspondence with which the public has no concern. I am quite willing, rightfully, to assume full responsibility for the error, which being obviously a matter of copy and not of misprint would in any event be laid upon me.

The matter can be solved in either one of two ways, of which I should prefer the second, but leave it to you and Professor Grensted to choose.

(1) To let line 13 stand as printed and add a footnote (hanging on " nx " in column 1) to the following effect:

" +Nx, salpingos, and salpinx are Latinizations of the respective Greek termination, or words, which arise for the reason explained in the preceding footnote. The equivalent of the Greek letters in the Latin alphabet are, respectively ' gx ', ' salpiggos ', and ' salpigx ' ".

(2) To make the corrections that I have previously suggested in columns 1, 2, and 4 of line 13, then to add as a footnote hanging on " nx " in column 1:

" + the Latinization of this termination and the ensuing words is, respectively, ' nx ', ' salping-os ', and ' Salpinx ', as will be obvious from the preceding footnote ". The use of these Latinizations in line 13 was the compiler's error.

I hope that you will find one of these two solutions acceptable.

7. It has been thought best to publish these extracts from the correspondence in fairness to Professor Bradley, Mr. Hemming and Professor Grensted.

DOCUMENT 33/12

Draft " Règles " : proposals on nine miscellaneous points

(Commission Reference : Z.N.(S.) 1329)

By **FRANCIS HEMMING**, C.M.G., C.B.E.

(*Secretary to the International Commission on Zoological Nomenclature*)

(Statement dated 5th June 1958)

The purpose of the present note is to draw attention to nine points arising in connection with Professor Chester Bradley's Draft of the English text of the Revised *Règles* (1957, *Bull. zool. Nomencl.* **14**) and to suggest the desirability of certain supplementary or other action being taken in regard thereto.

(1) Article 6, Section 1 : proposed correction of wording of centred cross-heading

Section 1 of Article 6 of the Draft *Règles* is concerned with those portions of the existing Article 25 (Law of Priority) which prescribe the conditions which names require to satisfy in order to acquire the status of availability. This Section is divided up into a series of centred cross-headings (printed in capital letters). Each of these refers to names published in some specified period, e.g., " Names published prior to 1931 ", " Names published subsequently to 1930 ". The first of these cross-headings (1957, *Bull. zool. Nomencl.* **14** : 48) reads " Names of any date ".

Clearly what is intended is " Names published on any date subsequent to 1757 " and it is suggested that this heading be corrected accordingly.

(2) Article 6, Section 8 : use of the word " indices " in the title

Section 8 of Article 6 in Professor Bradley's Draft of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 60) bears the title " Names published in indices of works ". The word " index " as used in England has a number of different meanings. Ten of these are listed in the *Oxford English Dictionary* (**5** : 202–203), and it is there explained that for some of these senses of the word the correct plural is " indices " and for others " indexes ". The sense with which we are here concerned is that which is enumerated in the *Oxford English Dictionary* and there defined as follows :—"An alphabetical list, placed (usually) at the end of a book, of the names, subjects, etc. occurring in it, with indication of the places in which they occur." The correct form of the plural for this sense of the word " index " is there stated to be " indexes ".

For the reasons set out above the word " indices " should be replaced by the word " indexes " in the title of Section 8 of Article 6 and anywhere else in that Article or elsewhere in the *Règles* where it is intended to cite in the plural the word " index " in the sense quoted above.

If the present is a case where usage is different in England and America respectively, it is suggested that the difficulties so involved should be overcome by the adoption of the procedure recommended in the paper which is being submitted as Document 78/1.

(3) Article 6 (Availability) and Article 8 (Priority)

In his draft of the *Règles* Professor Chester Bradley has recognised the essential difference between the two complementary principles of availability and priority which have hitherto been confused together, as the result partly of both having been dealt with in Article 25 of the existing *Règles*. Professor Bradley's decision to recognise the foregoing distinction by dealing with these matters in separate Articles (Availability in Article 6 and Priority in Article 8) is thus to be welcomed.

Unfortunately, however, Professor Bradley, in giving effect to the foregoing decision, has for some inexplicable reason abandoned the long-established expression " Law of Priority " (" Loi de Priorité "), substituting for it the totally unknown expression " The Principle of Priority " as the title for his Draft Article 8. In the case of his draft Article 6 Professor Bradley has introduced the equally unfamiliar expression " Rules of Availability ".

It is recommended that in the case of Article 8 the time-honoured expression " Law of Priority " be restored and that in the case of the parallel provisions in Article 6 the comparable expression " Law of Availability " be adopted.

(4) Article 19 : proposed compliance with Congress Decision as to the avoidance in relation to the names of nominal genera of the use of the word " type " unqualified by the addition of the word " species "

In Paris in 1948 the Thirteenth International Congress of Zoology, Paris, 1948 (1950, *Bull. zool. Nomencl.* 4 : 300) decided that, " where in the *Règles* (as in Article 30) or in the Schedules thereto, it was necessary to refer to the concept of a " a type species of a genus ", the expression " espèce type " and, in the English translation, the expression " type species " should invariably be employed ".

An attempt to comply with the foregoing Congress Directive has been made in the preparation of the text, for example, of Articles 19 and 21, but in a very large number of cases, especially in the first of these Articles, the word " type " appears in the unqualified form banned by the Paris Congress.

It is recommended that a systematic search should be made of the text of Professor Bradley's Draft and that the word " species " should be inserted after the word " type ", wherever it may be found that the Directive of the Paris Congress on this subject has not been complied with.

(5) Article 19, Section 3 : determination of the type species of nominal genera

In Section 3 of the Draft Article 19 (1957, *Bull. zool. Nomencl.* **14** : 122) Professor Chester Bradley has sought to set out the Rules governing the determination of the type species of nominal genera established before 1931 in those cases where that determination depends exclusively upon information contained in the paper in which the generic name in question was published or upon action taken by the author of the generic name in that paper ; in Section 4 of the same Draft Article (ibid. **14** : 127) he sets out the Rules governing the determination of the type species of genera when that determination does not depend solely upon information given in the original description of the nominal genus concerned. These Sections, which apply only to the names of nominal genera established prior to 1931, are closely related to one another and this is recognised by Professor Bradley by the stipulation in Section 3 (: 122, line 25) that the provisions there set out (which correspond more or less with those in Rules (a) to (d) in Article 30 of the existing *Règles*) are to operate " in joint sequence " with those in Section 4 of the Draft (i.e. the provisions which appear in Rules (e) to (g) in the existing *Règles*).

One of the commonest mistakes made in the determination of the type species of genera arises from a failure to take account of the instruction in the opening words of Article 30 which prescribe that the Rules there set out are to be " applied in the following order of precedence ". It is possible that the words " in joint sequence " inserted by Professor Bradley in Section 3 in relation to Section 4 of his Draft Article 19 are intended also to convey the meaning attaching to the expression used in the existing Article 30 quoted above. If so, I am bound to say that, in my view, the attempt has been unsuccessful. In view of the great importance of the provision in question and the consequent need for doing everything possible to avoid unnecessary ambiguities in the text, I recommend that Section 1 of Article 19 of Professor Bradley's Draft be amended to such extent as may be necessary for this purpose. The existing

Article 30 was drafted by the late Dr. C. W. Stiles of Washington, D.C., and, as it is plain and straightforward and in addition well known from fifty years of continuous usage, I suggest that it should be retained in the revised *Règles*, subject to such verbal adjustment as is required to link it in its new form with Professor Bradley's Section 4. The adoption of this course will have the further substantial advantage that it will restore into this Article the word " Rule " as applied to the successive provisions there specified. The disappearance of this word from the present Article would be unfortunate, both because a term of art is required to designate the particular provisions in question and because the use of this word in this sense is well established and well understood and its omission from this Article—for which there is at present no Congress authority—would be anomalous and possibly confusing. I accordingly recommend that Section 3 of Professor Bradley's Draft be recast as follows :—

> The determination of the type species of normal genera established before 1931 shall be governed by the Rules set out in the present Section (Rules (a) to (d)) as applied in the following order of precedence, and, if none of those is applicable, by the Rules set out in Section 4 below, those Rules also being applied in the order in which they are set out in that Section.

(6) Article 19, Section 3 : misplacing of provisions now appearing in sub-sections (b) and (c) respectively

In the immediately preceding note—Note (5)—attention has been drawn to the provision in Article 30 of the existing *Règles* that the Rules there set out for determining the type species are to be applied successively in the order in which they appear in that Article. It is necessary here to take note that in that Article the second Rule (Rule (b)) is concerned with situations arising when a new genus established before 1931 without a designated type species contained at the time of its establishment a new species having the specific name typicus or typus) and the third Rule (Rule (c)) with the determination of type species by monotypy.

When, however, we turn to Professor Bradley's draft we find that for no stated reason—and without any Congress authority—these two Rules have been transposed, the true Rule (b) becoming Rule (c) in Professor Bradley's document and the true Rule (c) becoming Rule (b). In practice it is unlikely that the transposition of these Rules would often lead to a change in the accepted type species of a genus, but the change is none the less objectionable, partly because there is no authority for it and partly because it represents an unnecessary disturbance of existing practice. There are for example many hundreds—probably many thousands—of references in the literature of systematic zoology to " Rule (c) (type by monotypy) " and it would, in my view, be quite pointless now to confuse the issue by rechristening that Rule as Rule (b).

I accordingly recommend that in conformity with existing Congress authority the provisions in Section 3 of the Draft Article 19 corresponding with Rules (b) and (c) respectively in Article 30 of the existing *Règles* should be restored to the order prescribed in Article 30 and therefore that Professor Bradley's sub-section (c) be renumbered (b) and moved to a position immediately following sub-section (a) and that Professor Bradley's sub-section (b) be renumbered (c) and placed immediately after the new sub-section (b) recommended above.

(7) Article 19, Section 3(d)(ii) : Linnean tautonymy

In transferring into the Draft of the *Règles* (1957, *Bull. zool. Nomencl.* **14** : 126) the decision by the Paris Congress (1950, *Bull. zool. Nomencl.* **4** : 155) to codify in a clarified form the Ruling given by the Commission in *Opinion* 16, Professor Bradley has copied into his text the expression " uninominal specific name " used in the record of the Paris decision. At that time this expression was correct, as so used, for the approved name for the second (i.e. specific) component of the binomen which constitutes the scientific designation of a species was " trivial name ", the expression " specific name " then having the meaning " name for a species ", i.e. the binomen consisting of the generic and trivial names applicable to the species concerned. The position in this matter was, however, altered by the (as I personally consider, unfortunate) decision by the Copenhagen Congress to eliminate the expression " trivial name " from the *Règles*, to apply the expression " specific name " to the concept previously known as a "trivial name" and to apply the colourless expression " binomen " to the concept previously known as a " specific name ". Applying these decisions to the present case we find that the expression " uninominal specific name " used in this connection by the Paris Congress has ceased to be correct and has indeed become meaningless ; for the terms here under consideration are not " specific names " in the revised sense described above. If the Copenhagen terminology were to be applied to the names here under discussion, it would be necessary to employ the ridiculous and meaningless expression " uninominal binomen ".

Before making a suggestion as to how to overcome the foregoing dilemma, it is necessary to draw attention to another defect in the present draft of Section 3(d)(ii) of Article 19. In this case the difficulty arises not from some change in the *Règles* by a later Congress but by a departure from the terms of the Paris Congress Decision by Professor Bradley when seeking to embody that decision in his Draft of the *Règles*. The resulting expression is unfortunate not only because of the misuse—as shown above—of the word " specific " in the expression " uninominal specific name " but also because of the use of the adjective " uninominal " as a qualification of the noun name, the resulting meaning, if any, being presumably a " one-namish " (or " one-namelike ") name. What is intended, of course, is a name of the particular category consisting of a single word, i.e. a " univerbal " name. This is in fact the expression deliberately used in this connection by the Paris Congress ten years ago, and it is the expression—being both the correct and the authorised expression—which should be used in this provision.

In order to remedy the defects discussed above, it is recommended that in Section 3(d)(ii) of Article 19 the words " uninominal specific name " be replaced by the expression " univerbal species-name ".

(8) Article 19, Section 5(c)(v) : proposed amendment of the expression " recording publication " to bring the phraseology employed into line with Congress Decisions

In Paris in 1948 the Commission had under consideration a request for a Ruling on the question whether a selection of a type species for a genus made in a serial such as the *Zoological Record* should be regarded as satisfying the provisions of the *Règles* (Hemming, 1950, *Bull. zool. Nomencl.* **3** : 84) and decided that this question should be answered in the affirmative (1950, *ibid.* **4** : 161). During the consideration of this question in Paris considerable discussion took place as to the descriptive epithet to be applied to the class of serial here in question and it was finally agreed that the expression to be used should be " literature-recording serial ".

Despite the foregoing the carefully devised and officially approved expression was not carried over into the *Règles* by Professor Bradley who instead introduced the much less satisfactory (because ambiguous) expression " recording publication " (see 1957, *Bull. zool. Nomencl.* **14** : 132, lines 14 and 16).

It is recommended that the officially approved expression " literature-recording serial " be re-instated in the passages in the *Règles* referred to above and in any other passages therein where this question may arise.

(9) Article 24 (provisions relating to homonymy)

In Point (3) I have pleaded for the restoration of the time-honoured and long-established expression Law of Priority (Loi de Priorité) which for some unexplained reason stands in Professor Chester Bradley's Draft (Article 8) under the new title " The Principle of Priority ".

The provisions in the *Règles* relating to priority and homonymy respectively are the twin pillars on which the availability of any given zoological name depends and it appears to me to be highly desirable that there should be no interruption of the now long-established use of the expression " Law of Homonymy ". This expression is in fact used in the title to Section 1 of Article 24. All that is required is therefore that this title should be given to Article 24 as a whole and that the wording of the Article should be examined for the sake of ensuring uniformity in phraseology.

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CORRIGENDA

page 778. Point (10), line 2 : substitute “ anon.” for “ anon,”.

page 779. Point (11), third line on page : substitute “ inadmissable ” for “ admissable ”.

page 780. Point (19), line 2 : after the words “ *tianshanicus, -a, -um* ” insert the words “ *tianschanicus, -a, -um* ”.

page 782. Point (34), line 3 : After the word “ constitute ” insert the following words :—“ alone self-propagating populations. Names are often given to ”.

VOLUME 15, SECTION B : PARTICULARS OF DATES OF PUBLICATION OF THE SEVERAL PARTS IN WHICH THE PRESENT SECTION (SECTION B) OF VOLUME 15 OF THE " BULLETIN OF ZOOLOGICAL NOMENCLATURE " WAS PUBLISHED

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Owing to the fact that the decision to divide this volume into two self-contained sections (Sections A and B) was not taken until near the completion of the volume, the arrangements for the provision of the Title-Pages, Tables of Contents, etc. needed for the two separate portions so brought into existence presented special bibliographical problems. These problems have been solved by the introduction of two series of pagination additional to that in Roman Capital Numerals which it had originally been planned to employ for the Title-Page and preliminary matter for this volume and which has now been reserved for the Title-Page and preliminary matter for Section A. The list of authors of papers included in Section A appears immediately after page 620 (the last page of that Section), the pages containing this matter being numbered 620a, 620b, etc. The Title-Page and preliminary matter for Section B has been allotted pages numbered in Roman Capital Numerals enclosed in round brackets (parentheses) to distinguish them from the corresponding pages in Section A. The list of authors of the papers included in Section B appears at the close of the volume. The pages so introduced have therefore been given pages numbers consecutive with those of the last portion of the main text. The page numbers accordingly run straight on from page 1260.

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